THE GENESEE FARMER

Vol. XIII. ROCHESTER, N. Y., DECEMBER, 1852. No. XII.

THE PHILOSOPHY OF TILLAGE — HORSE-HOEING WHEAT.

If one were asked to name the practical farmer, who, of all men from Adam down to the present generation, had most successfully studied the Philosophy of Tillage, he might without hesitation claim the distinguished honor for Jethro Tull, the inventor of drill husbandry, and the first to cultivate wheat by means of horse hoes. This great man can be best be introduced to the reader, and the date indicated when seed-drilling commenced, by allowing him to speak for himself:

"About the year 1701, when I had contrived my drill for planting sainfoin, I made use of it for wheat, drilling many rows at once, which made the work more compendious, and performed it much better than hands could, making them of a foot distance. Drilling in the seed and covering it did not all amount to sixpence per acre expense, which was about ten times over-paid by the seed that was saved; for one bushel to an acre was the quantity drilled. There remained no need for hand work but for the hoeing, and this did cost from half a crown to four shillings per acre. * * * This was such an improvement to land, [the hand-hoeing of drilled wheat,] that when one part of a strong whitish ground, all of equal goodness, and equally fallowed and tilled, was dunged and sown in the common manner, and the other part thus drilled and hand-hoed, without dung, the hoed part was not only the best crop, but the whole piece being fallowed the next year, and sown all alike, by a tenant, the hoed part produced a so much better crop of wheat than the dunged part, that a stranger would have believed, by looking on it, that that part had been dunged which was not, and that part not to have been dunged which really was."

While engaged in drilling and hand-hoeing wheat, in the early part of the 18th century, this illustrious farmer invented a valuable substitute for hand hoes which he called a "*horse hoe*," as it was worked by horses or oxen, like a common plow or cultivator. At that early day, little arable land was artificially drained in England, and wheat required to be grown on narrow and comparatively high beds to avoid damage from an excess of water in the soil. Mr. Tull laid his summer fallows, or stubble grounds, on which wheat was to be sown, in beds that were from five to six feet from center to center, and quite crowning. Along the middle of each bed he drilled from two to four rows of wheat — usually three — and eight or ten inches apart. At eight inches distance between the rows, only sixteen inches would be occupied on the ground by three rows,—one on each side of the center row and eight inches from it — leaving four feet and eight inches between the wheat in one bed and that in another. This was the widest central space ever allowed; and thirty inches the least that would well permit the use of the horse hoe, which might be called a cultivator, or shovel plow, or two-share plow; for during his forty years' practice and experimenting, the form and character of his tillage implements were often changed and improved.

The genius of this inventor prompted him to investigate and master the true principles of cultivating the earth. He plowed and hoed his growing wheat, and often stirred the ground, not because others tilled it, but to accomplish a clearly understood, and truly philosophic purpose. What was this purpose? It was not to imitate nature in

the production of plants, for she never plows, nor harrows, nor hoes the earth to obtain her most abundant fruits. His policy was purely a theory, or the ideal of a close thinking mind. He viewed and contemplated soils in this light: A square foot of impervious earth presents only 144 square inches to the chemical action and mellowing influence of the atmosphere. If a cubic foot of this solid earth was exposed, then six sides in place of one would come in contact with the air, and bring 864 square inches instead of 144 under the control of ærial powers. If this mass of earth were cut up into cubic inches, it would form 1728, each of which would present six sides to atmospheric agencies, making an aggregate surface of 10,368 square inches. In each of these cubic inches there are 1728 cubic lines, each of which would present six equal surfaces, and be, like the cubic foot, equally capable of subdivision; and so on *ad infinitum*. TULL saw that tillage does no more than comminute the soil; and that this pulverization really makes the desired pasture for the roots of all cultivated plants.

If it be in our time profitable, and a general practice to stir the earth above and near the roots of maize, which is a cereal, with a plow, cultivator, or hoe, may not growing wheat plants be cultivated, or horse-hoed, with equal benefit? On this point we have no doubt whatever. The soil between rows of rice (another cereal,) is profitably cultivated, as it is in the production of both sweet and Irish potatoes, in the culture of tobacco, cotton, sugar-cane, beans, peas, and garden vegetables. What is the full meaning, what the occult changes in the soil, wrought by the most perfect tillage?

First, It enables the arated mold, loam, or clay and sand, to absorb and condense from the atmosphere all the gaseous elements of crops, and particularly ammonia. When plants and animals die and rot on the ground, as they ever do in a state of nature, a large portion of their weight and substance is diffused through the air in well known gases. Hence it is that the atmosphere is charged with the food of plants, and may, when wise farmers shall know how to command this food, feed growing grain and roots for indefinite ages. That vegetable mold, mellow loam, and well pulverised clay, do absorb all the combustible elements of crops from the atmosphere, is not to be disputed. The only debateable points are the condition of the soil most favorable to the condensation of gases, and whether *it will pay* so to till the ground on which wheat plants are growing in straight rows as to depend mainly or wholly on the atmosphere for carbonic acid, nitric acid, and ammonia. To eleminate potash, soda, lime, and magnesia, from their insoluble silicates in the debris of rocks, from which the staple of all soils is derived, they need a good deal of what is technically called organic matter, viz: ammonia and carbonic acid. Hitherto intelligent farmers have depended on vegetable mold and manure for solvents of the silicates, phosphates, chlorides, and sulphates of alkalies and alkaline earths, so necessary to supply the incombustible, inorganic part of plants, which is called ashes when they are burnt. But adopting both the theory and practice of TULL, with slight modifications, induced by the light of modern science and discoveries, experiments are now being made in England, with every prospect of success, to draw all, or nearly all, the organic food of growing plants from the air, without the aid of guano, or manure of any kind. TULL'S leading idea was, that the cheapest manure in the world exists unseen and mostly in a latent state, in the soil and atmosphere, and in quantity sufficient for all practical purposes in all coming time. The soundness of this view must depend mainly on our success in drawing ammonia and carbonic acid, and, perhaps, chlorine, sulphur, and phosphorus, (which abound in a volatile and gaseous condition,) from the atmosphere.

The Rev. S. SMITH, of Lois-Weedon Vicarage, in Northampton, England, has succeeded in growing six or eight successive crops of wheat on the same acre, without any other manure than such as a soil finely tilled, twenty inches in depth, abstracted from the atmosphere. Of course many more years must elapse before the enduring advantages of this Tullian system can be fully demonstrated.

Mr. HOSKYNS, who has recently visited Mr. SMITH's experimental field, stated to the Council of the Royal Agricultural Society that the results were only so wonderful that they did not receive the credit they deserved; although when personally inspected, they carried at once a conviction of their perfect feasibility, notwithstanding the marvellous absence of all manure, as technically so understood, in the carrying out of his simple but effective process. Others have seen the Reverend gentleman's experiments; and among them Mr. GADESDEN, who thus bore testimony before the Council: "The soil was a stiff one, and so stiff that Mr. SMITH's own tenant farmer expostulated with him in reference to the circumstance; but although no manure had been used, it had *become so fertile* that it would be necessary to cast off the top staple and bring up the clay. Mr. SMITH had six acres in wheat, and intended to extend this system of cultivation to twenty. He understood that the Earl of Essex had fifty acres on the same system."

Mr. JOHN M. PAINE "could simply, but entirely, confirm all that Mr. HOSKYNS had said with regard to Mr. SMITH's experimental wheat fields under the Tullian mode of culture as practiced by him. He would, however, very briefly state what he saw, and the impression which Mr. SMITH's crops left on his mind. The first time that he saw them was immediately after inspecting Mr. LAWES' experimental wheat at Rothamsted, about the last day of June. He had thus a good opportunity of forming a comparison of the appearance of the respective crops at that time. Mr. LAWES' highly manured nitrogenous plots were then looking splendidly well. Mr. PAINE had also some of his own similarly manured, which was likewise very promising, and which did realize from seven to seven and a half quarters per acre—*i. e.*, from 56 to 58 bushels. He had thus in his mind's eye some very good standards of comparison, and he was bound to state that Mr. SMITH's *far exceeded either of them* [his own and Mr. LAWES'] in luxuriant appearance and promise of a crop. When he first beheld them, he could not help exclaiming, 'This land has been lavishly dressed with ammoniacal manure.' And so, indeed, it had been from atmospherical sources; for this we knew and could appreciate, after Mr. WAY's most valuable discovery of the absorptive and retentive powers of clay soils." Mr. PAINE's remarks throughout were alike instructive and interesting, but our quite limited space forbids further quotation without condensation. He could perceive nothing peculiar in the geological structure of the land at Lois-Weedon which would lead one to infer that Mr. SMITH's success in producing seven consecutive crops was at all attributable to that cause. It was manifestly what would be good wheat land when well drained and well cultivated. With common management, the surrounding country did not produce large crops.

On land which had been cropped several years without manure, Mr. PAINE drilled a half bushel of wheat per acre, on the 9th of November, 1851, on the Tullian plan. It could not be done earlier for reasons that need not be stated. Wheat barely got fairly up before frosts and winter, and looked thin and badly, and could not be trenched before March. The ground was then broken eighteen inches deep between the rows, and some of the subsoil brought to the surface. The rows had been hoed, and at that time the whole field had a most luxuriant and promising appearance; although like Mr. SMITH's it had too gross an aspect than otherwise. As the experiments now stand, the best returns may be expected by planting three rows of wheat within a space of twenty inches, making a central row and one on either side ten inches distant, and then leaving, as in planting corn in this country, an interval for the roots to spread and imbibe nourishment, of thirty inches.

So far as the principles of tillage are concerned, the difference between maize and wheat is not worth writing about. In neither should the plants stand too thickly, and in both their roots should have a deep, permeable, and rich pasture to secure a generous harvest. Thick and thin planting are terms too indefinite for scientific use. Ten years ago we urged upon the attention of wheat growers this view of seeding land to wheat,

and feeding the young and needy plants until they arrive at full maturity. One may have just food enough to rear and fatten two pigs, and with proper care and skill he may have each gain a pound a day in weight for three hundred days. If he shall attempt to rear and fatten four pigs instead of two, they may be grown; but to fatten them is out of the question. After they have reached a certain size, to keep so much flesh and blood alive, and from losing weight, will consume all the food within their reach, and of course such consumption is without profit to their owner. This waste of food and of time lessens the amount of meat and fat produced full fifty per cent.; for the four pigs must live all their allotted days, and eat every day, although they grow but half of the time, and only half grow while about it. What is true of four pigs, is equally true of four or five million wheat plants, pastured on a supply of nutriment equal to the full development of just half the number. You get a little more straw, more vegetable bone, (silicates) and a greater number of heads, or ears of grain; but beyond all question, nature gives you fewer and smaller seeds, less flour and less gluten and starch for bread.

This brings us to the subject of agricultural physiology — one on which, strange to say, no book has ever been published in the United States. Wheat culture is inseparably blended with the deep science of feeding, rearing, and fattening all living things on the farm. If we were asked what crop is best cultivated in this country, we should answer that it is not wheat, nor corn, nor tobacco, nor potatoes, but cotton. The cleanest culture in the United States may be seen in cotton fields, which have been properly plowed, hoed, "chopped out," and otherwise fairly attended. TULL chopped out his young wheat with hoes whose blades were only four inches long, having a sharp thin edge. He would be regarded in Western New York as a large wheat grower; and forty years' experience taught him the extreme folly of having a poor pasture in the soil, and too many plants to the square yard. Subsoiling he did not understand by name; but no other agricultural writer ever complained so much and so earnestly of his neglectful plowmen who would not do justice to his wheat beds — stir the earth deep enough and make it fine enough, nor roll it properly between the rows. The surface of tilled ground needs compression, for wheat.

BARN-YARD MANURE.

THE liquid and solid excrements of animals contain all the elements of plants in a state best suited for assimilation, and the great practical question of the farmer is how to preserve them without loss and apply them to the land in the best condition. Our present system of barn-yard management is most objectionable; by it the greater part of the liquid excrements are lost, and by injudicious fermentation a large quantity of the organic gases escape, and the soluble, and consequently most valuable, portion of the manure is washed away by drenching rains. These three evils every one familiar with farm management must have observed. The loss to the individual by such a reprehensible practice is great, and, viewed as a national evil, is most appalling. The direct loss to the farmers themselves, in the aggregate, is immense; while the indirect loss to the country is positively inestimable.

No farming can be profitable where the manure is thus shamefully wasted; nothing being plainer than that the crops of the farm and the profits of the farmer are in direct proportion to the amount and value of the manure made on the farm. The great aim of the farmer in the management of barn-yard manure, should be—first, To preserve all the liquid; Second, To keep up a slow fermentation, never letting the heap heat or ferment violently, and thus throw off its ammonia: Third, To prevent leaching during heavy rains and melting snows.

The first is perhaps the most difficult; and tanks for the reception of the liquid are often recommeded and adopted by first rate farmers, and we wish there was a good tank in every barn-yard in the land; yet we think that much may be done by covering the bottom of the yard with dry peat, muck, saw dust, waste straw, potato vines, and numberless other absorbent substances which can be found on most farms, and which, valueless in themselves, can thus be made into enriching fertilizers. If this be done and the yard be kept constantly supplied with waste straw, the heap will absorb all the liquid of the animals and what may fall in rain on its surface. If it will not, a tank, or water tight pond, should be placed in a convenient place in the yard and the superabundant water of the rainy season be preserved for pumping back on the heap in a dry period. If this liquid be kept saturated with sulphate of lime, or refuse common salt, it will be of great value to the manure, inasmuch as plaster will, in its liquid state, change the volatile carbonate of ammonia into the fixed salt, sulphate of ammonia.

The second object, or keeping up a gradual and not too rapid decomposition, is very easily attained. If horse or sheep manure be thrown up loosely, so that there is a free admission of air and moisture, rapid and most injurious decomposition takes place with the evolition of ammonia, carbonic acid, and water. This burning process (for it is nothing less than a slow process of actual combustion) may be allowed to go on till the heap is greatly reduced in size, and what is left be comparatively worthless. On the other hand, if the hog and cow manure be thrown in a solid heap, little or no decomposition takes place, and the manure remains in a raw and unsuitable state for direct application to rapidly growing plants. The object of the farmer, therefore, should be to mix these several manures together, so that the horse manure, &c., shall act as a ferment, and induce the desired decomposition of the hog manure, &c. In this way they will counteract each other, and the heap by spring will be in first rate order for direct application to the corn, potato, or other crops. Sheep do not like to lie on a fermenting manure heap. They should, if possible, have a separate yard to run in at night, and the manure they make be hauled to the heap as often as practicable, fresh straw being suppplied in its place. It is generally necessary that sheep and cattle should run on the manure heap so as to compress it and prevent too rapid fermentation.

The third condition necessary to preserve the valuable elements of manure is to prevent leaching. This can be accomplished by having all the buildings round the yard spouted, and the water conducted away without falling on the manure. If this is done, the water falling on the natural sarface of the heap will not usually be more than the manure can absorb; if it is, as we have before said, it should be preserved — saturated with plaster and conveyed back to the heap in dry weather.

We believe if these three conditions were attended to in the manner we have mentioned, or in some other way better suited to individual situations, the value of the manure on most farms would be at least doubled.

In conveying the litter from the stable, cow-house, and pig-pens, a good large farm yard wheelbarrow is absolutely necessary. Indeed, we think a wheelbarrow is one of the most essential vehicles to the proper management of a well-conducted farm establishment — a one horse lifting cart standing next in our estimation. Both are needed to perform much necessary work in the most economical manner.

We have said nothing about the condition in which it is best to apply manure, whether in a fermented or unfermented state, about which there is much difference of opinion, not only among chemists, but among farmers themselves. There is necessarily a loss during the fermenting process; but if it is confined to water and carbonic acid, the loss to the farmer is of little or no consequence. And if the heap is managed as we have directed, and especially if saturated solutions of plaster are frequently pumped and re-pumped on the heap, little of the ammonia need escape. In such a case the more the heap is reduced by fermentation, the less labor will be required to haul and spread

it; while from its concentrated *soluble* character (for many of the mineral substances are increased in solubility by fermentation with organic matter) it acts much quicker, and with more effect, on spring crops than though applied in the green state.

On heavy clay soils it is often advantageous to apply the manure in the green state, the carbonic acid generated by the fermentation of the litter in the soil assisting materially the solubility of silicates and other nearly insoluble salts. It increases, also, the porosity of the soil, and thus benefits it mechanically as well as chemically.

IMPROVED SUPERPHOSHATE OF LIME.

Most of our readers are probably aware that the Royal Agricultural Society of England offered some months since a premium of $5,000 and a gold medal for a chemical manure which shall be equal in value to Peruvian guano, and which can be afforded for $25 per ton, gross.

In the August number of the *Farmer* we mentioned having received two articles of superphosphate of lime made in New York, one under the direction of Prof. Mapes, editor of the *Working Farmer*, called "Improved Superphosphate of Lime;" the other by Deburg, called merely "Superphosphate of Lime." We there gave our opinion of their respective value as compared with each other, and with Peruvian guano, thinking that Deburg's was the better article as a manure for turneps and other root crops, but that for wheat, corn, and other cereals, Peruvian guano was very much superior to either.

This "improved" superphosphate of lime has been advertized in a great number of the agricultural papers, and many of our brethren, from confidence in Prof. Mapes' integrity, knowledge, and skill, as one of our first agricultural chemists, have, probably without trial or good evidence, recommended it to their readers. We hold it most important that at the present time, when there is evidently an awakening interest in scientific investigations, and the recommendations of chemists, that everything that will in any way mislead the farmer, or that will give him exaggerated ideas respecting the value of any chemical compound when applied to his crops, should be fearlessly exposed.

Prof. Mapes, in the November number of his paper, after noticing the premium above mentioned, says:

"The Royal Society may offer this premium with impunity, so long as the prices of bones, sulphuric acid, and ammonia shall remain as they now are. Long experience has now taught the English farmers that superphosphate of lime and sulphate of ammonia, when properly prepared, is worth nearly twice its weight of Peruvian guano; and attempts have been made to manufacture an article containing these requisites in proper proportions, and in a dry form, at £20 per ton, at which price it could readily be sold, but the high price of phosphate of lime and of sulphate of ammonia, has rendered this impossible, and the Royal Society may offer their premium fearlessly, until it can be proved that crops may be grown from other substances than those contained in them as proved by analysis.

"The Improved Superphosphate of Lime, used by us for the last five years, and now made for sale at $50 per ton at New York, cannot be duplicated in England for double that sum, and if it could, to our certain knowledge it would be done, and would soon take precedence of Peruvian guano at the present prices.

"Even the American native phosphate of lime is selling in England at £7 ($35) per ton, in large masses, the grinding of which to a powder is attended with large expenses, and even when ground it is useless as a manure, until treated with half its weight of sulphuric acid, thus rendering the prepared article in a perfectly dry state, costing much more than the cost of the Improved Superphosphate of Lime, which, from the absence of ammonia and many other of the constituents of guano, it is very far inferior to it in quality. It will readily be perceived that the Royal Society will not soon be called upon to pay over the £1000 so liberally offered."

We have had some considerable acquaintance with English farmers, and have always considered them by no means an intellectual class of men, but we never thought them such fools as the above hypothesis of Prof. Mapes makes them. If "long experience" has taught

them that phosphate of lime and sulphate of ammonia, in the proper proportions, are worth twice as much as Peruvian guano, why do they buy upwards of 151,000 tons of guano a year and pay $45 per ton for it, when they can buy burnt bones, or animal charcoal for $18 per ton, and sulphate of ammonia for $60; for we presume "the proper proportions" of Prof. MAPES would give much more of the phosphate of lime than of the sulphate of ammonia, so that this manure, of phosphate of lime and ammonia, could be made for less money than the guano. And if long experience has taught them that it is worth twice as much as guano, it is surprising that they use so much guano and so little of the mixture — so little, indeed, that we have never heard the manure mentioned. The assertion that such a manure "sold readily" at $100 per ton, but cannot be made for that sum, is most certainly a mistake.

Muriate of ammonia sells readily at $100 per ton, and from the high per centage of ammonia it contains, it is a cheap manure at that; but an addition of phosphate of lime would *reduce its value* in exact ratio as it was mixed with it. That this is the case, is most obvious from the fact that ammonia cannot be purchased in any portable form for less than twelve cents per pound, whereas phosphate of lime can be obtained in unlimited quantities as a mineral phosphate for less than one cent per pound, and in animal charcoal for thirteen mills per pound, and the price is gradually falling—large quantities, the refuse of beet sugar manufactories, which are now in a very flourishing condition, being sent over from Germany and France.

Sulphuric acid can be purchased in London for less than half what it costs in New York, and sulphuric acid is *the expensive ingredient* in the manufacture of superphosphate of lime. Such being the facts, what becomes of Prof. MAPES' assertion that his improved superphosphate of lime cannot be duplicated in England for less than twice its cost in New York.

According to an analysis now before us of "MAPES' Improved Superphosphate of Lime," by THOMAS ANTISELL, M. D., New York, it appears that 53 lbs. in the 100 of this manure consist of burnt bones or animal charcoal *little acted on by the sulphuric acid*, the value of which, in New York, would be about $10 per ton; the other 47 lbs. contain about 22 lbs. phosphate of lime, 8 lbs. sulphuric acid, half a pound epsom salts, 4 lbs. water, 3 lbs. lime and silica, and 10 lbs. organic matter and alkaline salts soluble in water. If such is the composition of the "improved superphosphate of lime"—and judging from the appearance of the article, we have no doubt of the correctness of the analysis—to say that such a compound cannot be made in England at $100 per ton, is at best supremely ridiculous. We think we could manufacture such an article there for $30 per ton and realize a handsome profit at that; though we doubt the possibility of selling it for $20 per ton, unless, indeed, we started an agricultural paper and devoted its pages to puffing the stuff. And, even in that case, we should need a *new* list of subscribers each year; for though English farmers are not very bright, they do not patronize the same humbug more than once.

In another part of the same number of the *Working Farmer*, Prof. MAPES, speaking of the large orders received for this manure this fall, says:

> "The old wheat districts are again profitable where the Improved Superphosphate of Lime has been applied; all agree with our former statements, that 500 lbs. of the new manure is as effective as 40 half cords (two-horse wagon loads) of well rotted stable manure, while its cost does not equal the mere expenses of handling the barnyard manure."

We have repeatedly advised our readers to make as much manure on their farms as possible. If they have done so, it appears it will be good economy to give it to some of their unscientific, book-despising neighbors, and send to New York and get 500 lbs. of "MAPES' improved phosphate of lime" to supply its place. Verily, this great discovery bids fair to revolutionize the established practice of agriculture.

"THEORIES EXAMINED AND EXPLAINED."

MR. LEVI BARTLETT, the associate editor of the *Boston Journal of Agriculture*, in a reply to our remarks on his series of articles headed "Theories Examined and Explained," thus writes in the November number of the *Journal:*

"Mr. KING:—Last evening I received through the Post Office, the October number of the *Genesee Farmer*, which some one has kindly forwarded to me. The paper contains some severe strictures on two or three communications I have furnished for several of the last numbers of the *Journal*. The article in the *Genesee Farmer*, I presume, was written by Dr. LEE, one of the editors of that paper. I regret that he did not wait till I had concluded the series, before he *reviewed* it. Perhaps if he had done so, he would have been better prepared to judge correctly, whether I am so very heterodox upon agricultural matters. He commences his review by heading it 'Theories Examined and Explained,' and then says, 'such is the comprehensive heading of a series of articles, which Mr. LEVI BARTLETT, of Warren, N. H., is writing for the Boston *Journal of Agriculture*.' I gave no title to my communications, but the editor of the *Journal of Agriculture* headed it 'Theories Examined and Explained,' and is undoubtedly able to give sufficient reason for so doing, if he thinks proper to do so. This, then, is the 'whole head and front of my offence,' in reference to this 'comprehensive heading.'

"I have not time now to reply fully to the criticism of the *Farmer* on my articles; but from its tenor I think the writer entirely misjudges my views. He seems to suppose me strictly an advocate of the mineral theory, and opposed to the nitrogenous system; and that I am calling in question the correctness and utility of Mr. LAWES' expensive and valuable experiments. If so, he, or any one else so supposing, labors under a great mistake. My object in writing these—what the reviewer, in the height of his courtesy, terms—'gassy articles,' is not to build up or put down either of the above named theories. After many years of reading and observation, joined with unremitting labor on a farm, I do not find myself wedded to either system to the exclusion of the other; nor have I ever blindly written in favor of one side of the question, forgetting the merits of the other. In the course of my agricultural reading, I have come across a great many contradictory statements as to the results of different experiments, from the use of different manures, and also from the use of the same kind of manures on different soils. These diverse results, in connection with the contradictory opinions among scientific agricultural writers, are sorely puzzling to the great mass of working farmers, and serve rather to foster their prejudices than to throw light on their calling. Now if any correct explanations of these apparent discrepancies are ever to be made, it must be done by scientific investigations. In beginning the series alluded to, it was my great aim to reconcile, as far as possible, some of the 'vexed questions' of farming;—to explain them in such a manner as every farmer could understand them;—and thus to do away with much of the opposition against the application of science to agriculture. How far I may succeed in accomplishing said objects, I shall cheerfully leave to the good judgment of the readers of the *Journal*. The reviewer says I promised to bring forward facts and statements to support the mineral theory. Again he says, 'in number three of the series of letters, we have repeated assertions, but none of the promised experiments or facts.' Had he waited till the publication of my October number, he would have found some of the experiments reported; and for aught I know, Profs. DAUBENY, LINDLEY, ROGERS, HENSLOW, &c., are entitled to full credit. Having a few more facts of the same kind on hand, I shall bring them forward, not, however, for the purpose of attempting to kill the ammonia theory. If the reviewer will turn to page 69 of the *Journal*, he will find that I am as strong an advocate of ammoniacal manures on *some* soils, and for *some* crops, as he is himself.

"The reviewer says, 'that neither LIEBIG nor Mr. B. appear to have read the pamphlets written by Mr. LAWES' himself but have taken up their able pens to refute what they have obtained only at second hand.' Again he says, 'as our article on plowing in green crops appears to be the source of Mr. B.'s information, why does he not attempt to refute the positions there maintained by us and not attack Mr. LAWES?' I did not attack Mr. LAWES, or undertake to refute the correctness of his experiments or statements, or even to express a doubt thereon. My sole object, in writing the articles in question, is, as I have said before, to attempt to reconcile some of the disputed points in agriculture.

The term "gassy" was applied to the articles of a well known class of agricultural writers who do nothing but write, in contradistinction to those who investigate the laws of nature in the field and laboratory, and not in any way to Mr. BARTLETT'S articles. We have usually read Mr. B.'s communications with great pleasure, and were not a little surprised and sorry that he had joined sides with the "mineral manure theory" advocates, as we most certainly thought was the case from the tenor of his "Theories Examined and Explained." We are, however, glad to find that we were mistaken, and that Mr. BARTLETT is "as strong an advocate of ammoniacal manures on some soils, and for some crops, as" ourselves.

Mr. B. has written four successive articles on this subject. The first was in reply to an article by R. M. COPELAND, of Boston, who thought mineral manures were not of so much consequence as ammoniacal ones; the other three articles have all been in reference to Mr. LAWES' experiments, or at least to a few results of his we gave in our article on "Plowing in Green Crops." That this article was the object of Mr. BARTLETT'S criticism, we had good reason to suppose from the fact that he quoted our summary statement of the results of these experiments, and adopted portions of our *language* in reference to their application to common farm practice. Besides, we stated some facts connected with the experiments, which have been published no where else; and these, too, Mr. B. mentions. Would it not have been more consistent with Mr. BARTLETT'S deservedly high reputation and scientific attainments, either to have "examined" Mr. LAWES' own account of his experiments, and his deductions from them, before he attempted to "explain" them? Or, if our article was the only source of Mr. B.'s knowledge of these experiments, (as we are forced to believe it was, otherwise he would not have *confined* himself to our account of them,) would it not have been more candid and honorable to have said so?

As the articles now stand, we hardly know what Mr. B. wishes his readers to believe respecting this "vexed question"—whether he coincides with our expressed opinions on the subject, or on what particular points he differs from us. Mr. B. says: "Had he waited till the publication of my October number, he would have found some of the experiments reported; and for ought I know, Profs. DAUBENY, LINDLEY, RODGERS, HENSLOW, &c., are entitled to full credit." In the October number we find another article "examining and explaining" the few experiments of Mr. LAWES as given by us, and a few others giving, as he supposes, results very different; and engages earnestly in the effort of reconciliation. He first quotes from the late Prof. NORTON as follows:

"Prof. NORTON says, 'that during his stay in Edinburgh, samples from more than five hundred cargoes of guano were analysed in the laboratory of Prof. JOHNSTON, and were sold by his analysis, fluctuating in price as they indicated more or less ammonia. Had there been any mistake in this method of estimating value, experience would soon have detected it.'

"But notwithstanding the beneficial action of the sulphate and muriate of ammonia as used by Mr. LAWES, and what Prof. NORTON and others have said of its importance, there are numerous well authenticated facts on record that prove most clearly that the application of ammoniacal manures is not *always* attended with very marked beneficial effects, and there are also numerous cases where mineral or saline manures alone have produced extraordinary results, notwithstanding their failure on Mr. LAWES' wheat crop. Why such different effects should be produced by the same kinds of manure on different soils, is an important inquiry for the farmer; the only reasonable way of solving the question is by assuming as *facts*, the general principles laid down by LIEBIG, JOHNSTON, and other scientific writers on agriculture."

If we are to assume as *facts* the principles of LIEBIG and JOHNSTON, as applied by them to agriculture, there is no further necessity of field experiments, and BOUSSINGAULT and LAWES have spent their years, strength, and money, for that which profiteth naught; for the results of both of them are contrary to the principles of agriculture as laid down by LIEBIG and his followers.

But, to the promised experiments. The first is on *turneps*, on which phosphate of lime is found to do as much good as nitrogenous manures.

The second is by a friend of Prof. LINDLEY, near St. Albans, and is likewise on turneps. "The experiments were made, as all experiments should be, on an exhausted soil." Query: Who was the experimentor? Mr. LAWES' estate is four miles from St. Albans; his experiments on turneps, and in fact all his experiments, were made on an agriculturally exhausted soil; and he is a personal friend of Prof. LINDLEY. The chief result of these experiments is, that the *ashes* of a given quantity of barn-yard manure gave more turneps per acre than the same quantity of manure unburnt.

The next experiment is to show that the *ashes of wheat* are better manure than guano. The crop to which they were applied is not given.

Another experiment is from Prof. H. D. ROGERS' Geological Report of New Jersey, as follows: "Mr. WOOLEY manured a piece of land in the proportion of 200 loads of good stable manure to the acre, applying upon an adjacent tract of the same soil his marl, in the ratio of about 20 loads per acre. The crops, which were timothy and clover, were much the heaviest upon the section which had received the marl." There is evidently an error in the *figures;* but we presume the fact that the marl did most good, is well established.

What, we ask our intelligent readers, do these sundry experiments amount to, as the foundation of agricultural principles; or what do they show, as applied to the subject of discussion? They were tried, not on wheat, but on turneps, and timothy and clover. For turneps and clover we have always recommended soluble phosphate of lime as the best of all manures, and think ammonia unnecessary; that phosphate of lime, or any other mineral ingredient, does no good when applied to wheat on ordinary wheat soils; but ammonia, in whatever form applied, whether in barn-yard manure, guano, or salts of ammonia, is of great benefit. The experiments quoted by Mr. BARTLETT corroborate rather than disprove the truth of this proposition.

BRITISH AND AMERICAN AGRICULTURE.

THE following conversation between two intelligent Western New York farmers, one of whom has recently returned from a visit to Europe, gives a good account of British farming as contrasted with American agriculture; with other matter that will be found interesting to the agricultural reader.

A. What most surprised me when first visiting the country in England, was the number and width of the hedges, some of them as crooked as a fiddler's elbow, and occupying a rod or two of land, and in many places thickly studded with trees, or, as they there call them, "hedge row timber," which do immense damage to the land. One farmer in Shropshire, when mentioning my surprise to him at this, said that many of the landlords objected to the tenants removing these crooked old hedges for fear of disturbing the game for which they afford an admirable shelter. He pointed me to a field of his, of six acres, around which there was a hedge and ditch at least a rod and a half wide, and in the hedge there was eighty-five large trees, which did great damage to the crops. The same farmer told me that the game did him at least $500 damage a year on a farm of 250 acres. He complained most bitterly of Free Trade—said it was ruining the farmer, and that he was now losing money by farming, but that his landlord had promised to destroy the hares and rabbits, which do the principal damage, and to remove the hedge row timber; but nothing could give them such times as they had under protection, with wheat at an average of $3 per bushel, and barley and other grains in proportion. The difference in the language, customs, and farming of even adjoining counties, perfectly astonished me. The farmer above alluded to said that when ELIHU BURRITT, the American "learned blacksmith," was lecturing in that neighborhood, he was one day speaking to his men of the many languages this working man had acquired, when a good old familiar servant, who often held forth as a primitive Methodist preacher, said that he knew two languages. His master, a little surprised, wished to know what they were; he replied, "Shropshire and Cheshire,"—two adjoining counties. Some twenty years ago, it is said that the judges at the assizes in the county of Lancashire were under the necessity of employing an interpreter before they could understand the language of the witnesses. The difference in farming operations is equally striking. In some counties you will see three, and sometimes four horses, one before the other, drawing a single plow, with a man to hold and a boy to drive—an acre being considered a good day's work. In another county, "double plows," or plows that take two furrows at once, are commonly used. If the land is heavy, or they wish to plow deep, five horses are attached to it *in length.* When plowing for barley in the spring, on light soil, four horses only are used, and they will plow from two to three acres a day. The plow will run itself, so that one man only is required; he does nothing else but attend to his four horses, generally commencing work at six o'clock in the morning, has a lunch and beer about ten, and leaves

off work for the day at three in the afternoon. In other parts, however, they abandon the tandam system altogether, and plow, harrow and cultivate as we do here, with two horses abreast. This is called the improved system of farming, and is rapidly being adopted all over the country.

B. Your account of English agriculture differs vastly from that given by many of our writers on the subject. I have always understood that England was the garden of the world—that the farmers were reading men and farmed on scientific principles.

A. Many parts of England and Scotland well deserve the name of gardens. The farmers are as you say, men of education and fortune, and farm in a style far exceeding any anticipations writers would lead us to indulge. The beauty of the landscape, large fields divided by straight and well trimmed hawthorn hedges with occasional shade trees, the luxuriance of the crops, perfection in the breeding of horses and all other domestic animals, the thorough system of under-draining, their beautifully arranged, substantial homesteads, with steam threshing and other machines, their well filled "stack-yards," and the neatness and system with which everything is done, command our involuntary admiration. Yet while this is so, the great mass of English farmers are by no means such an intelligent, industrious class of men as the farmers of this country. They expend much more capital and labor on the land than we do, and get much larger crops, yet I by no means think that they can raise a bushel of wheat, or a ton of clover, for a less sum than we can.

B. How is it that they obtain such large crops? The climate I have always understood is not as good as that of this country. It would seem that possessing our own farms, having no game or hedge row timber to trouble us, few taxes and no rent and tithes to pay, no restrictions as to our mode of farming, being in short lords of the soil, we could raise better crops than the English.

A. In regard to our climate being so much better for agricultural crops than that of England, I have considerable doubt. It is true our Genesee wheat is much superior to theirs, being heavier and plumper; yet their barley is much better than ours, weighing on an average 56 lbs. to the bushel, whereas ours here seldom goes over 45 lbs. Their growing season is much longer and cooler than ours, and the climate is most admirably adapted for the culture of roots, clover, and the far-famed English perennial grasses. It is the culture of these crops that places their agriculture so far ahead of ours.

B. You think then that our climate is better adapted for the growth of wheat and corn, and theirs for the growth of clover and other green crops.

A. They do not raise such heavy crops of red clover as we do here. Many farmers told me they could not raise red clover once in four years, and substitute trefoil, white Dutch, and other varieties of clover and grasses in its stead, sowing the red clover once in eight years, and on the light barley soils once in twelve years. We can beat them altogether in growing clover. But it is the *Turnep crop* that lies at the foundation of England's agricultural glory. It is generally admitted that more nutritious matter can be obtained from an acre of land cultivated with Mangel Wurtzel, Ruta Baga, or common turneps, than from any other crop; and the climate of the British Isles is, perhaps, better adapted to their growth than that of any other country.

B. I do not clearly see how it is that the cultivation of turneps can make such a vast difference in the agriculture of the two countries as to make theirs so much superior to ours. If our climate and soil will grow better wheat and clover than theirs, we can easily dispense with turneps, for I consider clover the most valuable and the least exhaustive crop we grow. If I get a good crop of clover I make sure of good wheat after it.

A. Just so, you get a good crop of wheat after plowing in a growth of clover, because the clover has attracted fertilizing gases from the atmosphere and organized them by the aid of mineral matter from the soil. These when plowed in, or if the roots only are left, decay and furnish just the food in a fit state for assimilation, the wheat plant requires. This is eminently the case with clover; but the same thing is obtained by the English farmer, to a much greater extent, by means of his turnep crop, than we can with clover, and in this respect he has the decided advantage of us; that is to say, he can obtain more food per acre from his turnep crop than we can from any crop grown here, and can consequently keep more stock on his farm, and make more manure, thereby increasing the available food for plants, or, so to speak, have a greater amount of floating capital at the disposal of the plants.

B. You wish to make it out then that the superiority of British agriculture is not owing so much to science, or to their superior manner of cultivating the soil, but to the possession of a climate well suited to the production of large crops of turneps.

A. There are a great many scientific farmers there who are deserving of great credit for the number of experiments they try, and which serve to bring to view great principles in agricultural science; yet I think that the immediate cause of their growing larger crops of wheat and other grains than we do, is to be ascribed to the turnep crop and to the higher prices they even now command for meat, which enables them to purchase from us such large quantities of oil-cake to be consumed on their farms in its production:

B. It is no wonder that they have good crops if they grow such large quantities of turneps and grass, and buy oil-cake to eat with them, as well as large quantities of guano and other artificial manures. I guess our Western New York land would produce as well as theirs, if treated in this way.

A. I have not the least doubt that if we were to keep as much stock and manure as highly as the English farmers do, we should obtain, with our superior climate, for the elaboration of grain, at least fifty bushels of wheat to the acre, and one hundred bushels of *shelled corn* would be considered a poor crop. It is the general impression among farmers in England, that we raise much larger crops of wheat than they do. In fact, they have the strangest notions respecting us you can possibly imagine, and I believe the mass of the people who are certainly in love with our democratic institutions, think more of us than we are strictly entitled to. Everywhere I found myself an object of interest and was treated with marked respect and attention. I passed the greater part of my time in the country and thoroughly studied their most approved systems of farming, and by no means regret the time and money the journey cost me. I was most pleased with the farming of Norfolk. Some fifty years since it was nothing but a drifting sand. It is now the best farming county in Great Britain, producing more meat and grain per acre than any other.

But it is now getting late and I will have another talk on the subject some other night.

PEA CULTURE IN INDIANA.

We have repeatedly recommended peas as one of the best crops that farmers can grow in rotation with wheat. They exhaust the soil little, if any, of those substances which wheat plants specially require; while the consumption of the pea and vines on the farm makes the manure of great value for wheat and corn. The great drawback to pea culture is the pea bug, though, as we recommended in the September number, if the peas are grown for feeding hogs, they may be all consumed before the bug does much injury. A gentleman in this neighborhood, at our recommendation, sowed four acres of the common white pea, and four acres of the Scotch grey pea, last spring. He had an excellent crop, the Scotch grey being somewhat the best. At harvest time there was not a bug visible. They were in excellent order when put in the barn. They have just been threshed, *and the bugs have eaten nearly all of them.*

The following interesting article from the *Indiana Farmer*, by I. D. G. Nelson, Wayne Co., Ind., shows that our western readers are wide awake and willing to try any experiments suggested to them. In the May number, page 142, we recommended late sowing as a preventive of the pea bug. The following experiments are to the point:

"Knowing something of the pea as a field crop when I was a boy, residing in the State of New York, where it is extensively grown, I determined some three or four years ago to make the experiment here. I found the seed scarce, and was obliged to purchase in small quantities of three different persons—sowed each variety, as I supposed, by itself, but found when ripening all *mixed*, some 'dead ripe,' others scarcely out of bloom. The yield, as you may well know, was a poor one, and the pea bug rendered worthless, or nearly so, those that I did raise. Not entirely discouraged, however, and not distinguishing among them the variety, as I thought, that is familiarly known in New York as the Canada field pea, I sent and obtained from J. P. Fogg & Co., Rochester, N. Y., the pure seed.

"Then the depredations of the pea bug, that is so fatal to its cultivation, nearly everywhere haunted me; but having read 'a long, long time ago,' in the *Genesee Farmer*, (a paper that I have always taken since it was established, some fifteen years or more ago,) that to prevent the depredations of the bug, peas should be sown after the 10th of June, I made the experiment; sowed one half 1st of April, the other half 10th of June. 'Book farming; eh!' exclaimed a friend to whom I explained

what I had been doing. 'It's all in your eye—the only reason why your peas will not be stung, will be because there will be no peas to sting.' Now for the result; those sown in April produced somewhat the largest crop, but were literally alive with bugs; those sown in June entirely free from them. Determininig to test the matter further, and not having more seed than I wished to sow, I experimented further the following season, '51. I put all the peas together and sowed them promiscuously, bugs and all—a small portion the 1st of April, the remainder the 8th of June, side by side. The result about the same as the previous year—the April sown peas rather the greatest yield but full of bugs; those sown in June entirely free from them. Satisfied with the experiment, I sowed several acres this season, the 10th of June. I have just gathered them, and find no marks of the sting of the insect; the yield is much the largest I have ever had.

"My method of cultivation, is to prepare the ground well and sow about three bushels to the acre. I intend to experiment further next year, by sowing four bushels. I am inclined to think they will stand up firmer and yield more. I observe this season that uniformly where they stood thickest on the ground, they stood up better and looked finer. Yield from fifteen to twenty bushels—this year somewhat more. They should be gathered when fully ripe. Mow them with a scythe, in dry weather. Avoid rain if possible, and get them in the barn. If there is no mow room, thresh out immediately, clean up as soon as threshed, and give them the benefit of the barn floor a few days until they are perfectly dry, as they will heat if put up in bulk. I lost some in that way last season. The straw should be saved, as it is better for stock than wheat straw or poor hay.

"Next, as to the use and value of the crop, which is the important part of the subject. The uses are various; as food for stock it is highly valuable and profitable in the Eastern States, but whether it will prove so here or not I am not sufficiently posted up to speak definitely, but am inclined to think not, in our great corn districts. If I should raise them for that purpose, I should sow earlier, as the bug does not materially affect their value if fed immediately, and the yield is rather larger. They give hogs a fine start early in the fall immediately after the stubbles are exhausted, by fencing off and turning in, or cutting—feeding vines and all. A little later, and before corn is fit to feed, they may be boiled with pumpkins and potatoes—indeed, if properly managed, but little or no corn will be required to make fine pork. It is thus profitably managed elsewhere and I can see no reason why it may not be here. * * * * * * * * * * *

"The result of my experience, then, in the raising of peas amounts to this: Those that I raised last season were the first I sold. The product of the April sown peas were alive with bugs, and to prevent them from emigrating, fed them to my hogs. Those sown in June sold freely at two dollars per bushel, and I could not supply the demand; bnt what added peculiar interest to the matter was, that two bushels were sold to the person who thought that raising peas free from bugs was 'all in your eye.'"

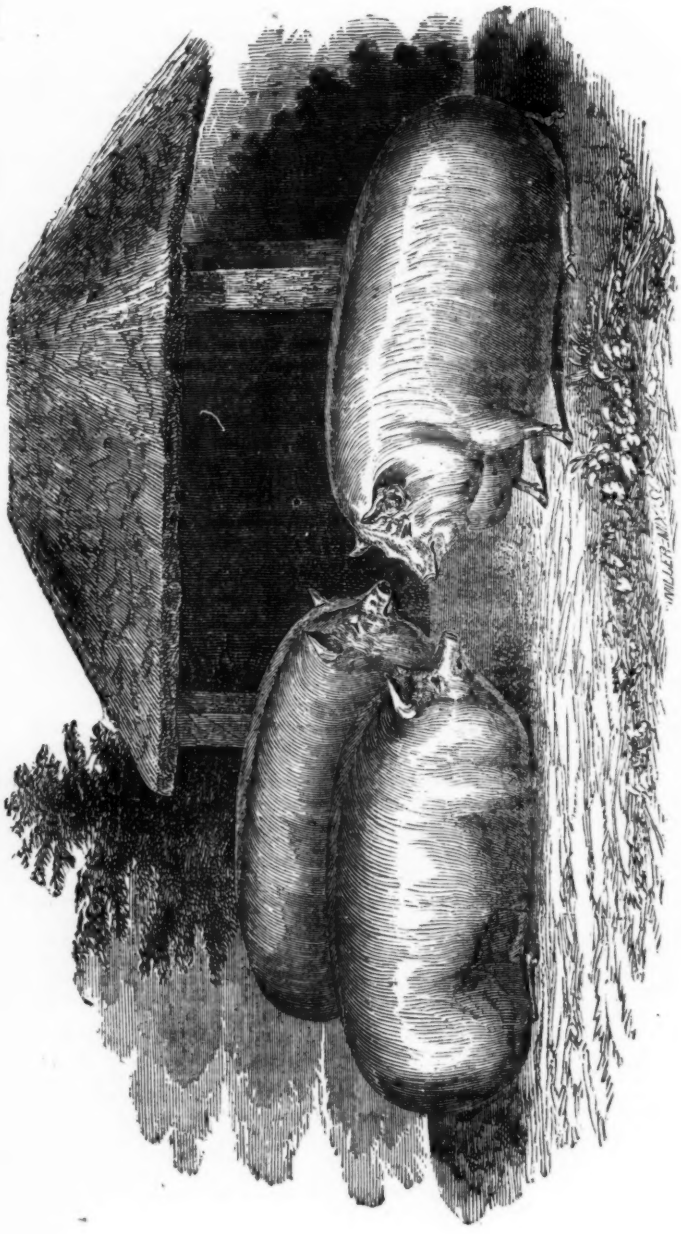
Guano on Potatoes.—Last spring I planted four acres of potatoes on a two year old sod; the soil was a very light gravelly loam, well calculated to raise *sound* potatoes, but as it had been hard run, and never manured, it could not be expected to produce a large crop. I plowed the land deep and well, as early as the weather would permit, letting it lie till the time of planting—May 10th. It was then dragged, and on two acres 600 lbs. of Peruvian guano were sown broadcast. The land was then furrowed out in rows about three feet apart and potatoes planted in the rows, from twelve to fourteen inches between the setts. On the remaining two acres no guano, or manure of any kind, was applied, though treated exactly alike in every other respect.

As soon as the plants were up there was a decided difference visible. The guanoed ones having a richer, darker hue, which they maintained throughout the summer. In the fall, when the unguanoed potatoes were quite ripe and the vines dead, the guanoed ones were growing luxuriantly, the vines covering the whole space between the rows.

The potatoes were dug the last week in October, and accurately measured. On the unguanoed two acres, there was 238 bushels, and on the two acres guanoed, 410 bushels, making a difference in favor of the guano of 86 bu. per acre. All the potatoes are perfectly sound and good, but the guanoed ones are much the largest, with scarcely a small one among them. The guano cost in New York two and a half cents per pound; freight, breaking the lumps, sifting, and sowing it, would make its cost on the land three cents per pound, or $9 per acre. The 86 extra bushels of potatoes will more than pay for the guano, &c., and leave a good profit from the investment.

As regards the best mode of application, I may state that in another field this year I had an acre of potatoes, part of which were guanoed, as on the other two acres, by sowing broadcast, planting the potatoes in hills. On part of the acre the guano was applied *in the hill*, placing the guano immediately over the potatoes, separating them with a little soil, otherwise it would injure the sett. The potatoes thus treated were *much better* than where the guano was sown broadcast. Four rows left unguanoed were not more than half as good as where guano was applied.

I consider guano a most powerful and valuable manure, though whether it will pay as well to apply it to wheat, corn, or other grain crops, as it has in this instance to potatoes, I cannot say. I have sown some on wheat this fall and can already see how far it extended, the difference being very perceptible. H. C. Ives.—*Rochester, N. Y.*, 1852.



IMPROVED MIDDLESEX PIGS

BRED AND FED BY MR. WM. MILLS BARBER, OF UXBRIDGE, ENGLAND, FOR WHICH THE FIRST PRIZE OF $50 WAS AWARDED, AND THE SILVER MEDAL, AT THE SMITHFIELD CATTLE SHOW.

MIDDLESEX HOGS.

Less, perhaps, is known in regard to the respective feeding qualities of different breeds of pigs, than of most other farm stock. We have had something approaching to a series of accurately conducted experiments upon the fatting qualities of different breeds of sheep, and also sundry, if not systematic, experiments on the fatting and milking properties of the principal breeds of cattle, such as the Short Horns, Devons, Ayrshires, Herefords, &c.; but we are not acquainted with one single experiment, that is comparative or satisfactory, in relation to the amount of meat produced, from a given quantity of food, by the various breeds of hogs. There are innumerable single experiments, but when we come to compare them we find that the animals were of different ages, fed on different food, and in short were differently treated in every respect. The results of course are very different. There would be "magic in the figures," could we trust them, and startling theories might be based thereon. There is always a certain degree of truth in the opinions of practical men, founded as they are on long experience, yet it would be interesting to every intelligent farmer to *know certainly* whether these opinions are true or not, and this can only be known by a series of experiments. It is supposed by many practical farmers that the small breeds of hogs will lay on more fat for the amount of food consumed than the large breeds. A carefully conducted experiment would settle the point. Who will make it? All the valuable English small breeds of hogs have been greatly improved by judicious crossing with the Chinese and Neapolitans. The Suffolk, Essex, Middlesex, and Berkshires, have all more or less Chinese and Neapolitan blood. All of them possess many valuable points, and are respectively best adapted for particular objects. For early maturity, rapidity of fattening, and small proportion of bone and offal, the Middlesex breed is, in our *opinion*, second to none.

The accompanying engraving represents three beautiful specimens of this breed, as exhibited at the Smithfield Club Cattle Show. "They were farrowed on the 18th of June, and were fed, from five weeks' old, on middlings, boiled potatoes, and peas, up to eleven weeks' old, when they had barley and pea-meal, and boiled potatoes, mixed with water. They consumed in thirteen weeks, twenty-eight bushels of meal and four bushels of potatoes. They were tried on milk, but did not thrive so well on it as on water. In consequence of their great propensity to fatten, they were blind with fat at sixteen weeks old, and when exhibited their eyes were buried two inches in fat, which came over their forehead and lay on the top of their noses full three inches.

The following is a statement of their weight and age while fattening:

Date.	Weeks old.	First.	Second.	Third.	Mean increase per week.
July 22	5	24 lbs.	24 lbs.	20 lbs.	
August 18	8	52 "	44 "	42 "	7¼ lbs.
September 8	11	80 "	72 "	64 "	8¼ "
Ditto. 24	14	104 "	96 "	88 "	8 "
October 15	17	152 "	144 "	132 "	15½ "
November 5	20	200 "	192 "	192 "	17½ "
Ditto. 26	23	232 "	234 "	234 "	10⅝ "
December 6	24 and 3 days.	232 "	224 "	224 "	

This breed of pigs has been much improved by Mr. Barker (the exhibitor) in the last seven years. They are of a pure white color, of great substance and propensity to fatten. They keep in excellent condition while stores on grass, turneps, offal from the barns or garden, and when put up to fat, in two or three weeks make excellent porkers. They are fine in the bone and head; small upright ears, which point a little forward. They are of a small size, have good litters, varying from seven to fourteen in number, being very fat while sucking, and thus making very good roasters.

Horticultural Department.

CONDUCTED BY P. BARRY.

OUR NATIVE TREES.

All at once there appears to have sprung up a very unusual appreciation of the beauty of our native trees. In half a dozen publications, issued at widely distant points, we find their eulogies set forth in the most glowing and enthusiastic terms. This is one of the most striking evidences of the growth of *real* taste that we have yet met with in all that has been said and written on horticultural subjects. As long as the riches and beauty of the sylvan treasures that nature has so unsparingly scattered over our own land, and around our own homes, remained unnoticed and unadmired, so long would it be indeed a most hopeless task to attempt to promote improvement in that department of horticulture which depends entirely upon taste. It is quite impossible that any one should be possessed of what is called taste, as relates to landscape or gardening, without having *felt* the grandeur and the beauty of our natural plantations and landscapes. What use would it be to talk of the artistic beauties of an English park, to a man who had lived his life time in the beautiful valley of the Genesee without seeing anything to admire in its charming landscape — its noble forests and broad meadows, blended with a skill that mocks man's puny efforts; — a man who had passed up and down the Hudson river a thousand times without feeling a single impression from its grand and picturesque scenery, the rock-work of which, compared to the artificial rock-work of the landscape gardener, is as a child's toy compared to a genuine gothic castle, or an outlet of a mill dam to the falls of Niagara. It is idle to describe the beauties of a *Deodar Cedar* to one who has not comprehended the grace and beauty of the Hemlock Spruce that grows by his door, or to talk of the lofty Pine of the Himalayas to one who has never looked upon our noble White Pine with admiration. The cultivation of rural taste, like the exercise of that greatest of virtues, charity, should "begin at home." Until we learn to love and admire the sweet and beautiful violet that blooms at our feet, it is folly to send to the antipodes for something more beautiful in imagination. We rejoice, therefore, to witness some healthy symptoms of an awakening sense of our native beauties, and to hear of people actually admiring and planting our native trees. We have never heard so many people speak of the beautiful autumn tints of our forests, as we have this past autumn; and this we are happy to note as another strong evidence of the growth of taste. The colors of the dying foliage have been indeed unusually brilliant and striking; but they have been so only to those who have some perceptions of the beautiful, and in whose hearts there is at least the *germ* of the love of nature.

This is a subject on which we would like to dwell, but we must await another opportunity. At present we will make a practical suggestion; for practical we must be, if nothing else.

There is many a good, honest farmer, whose dwelling stands bare as a light-house on an ocean rock, exposed to every wind that blows and every ray of sun that a merciless mid-summer day pours down on its devoted walls and windows. The very chickens can not find a shrub to shelter them, without making a journey of half a mile. Now that winter is upon us, and there are idle men sighing for something to do, and idle horses gnawing their stalls and growing unruly for lack of exercise and labor; go into the woods some fine, mild day, when there is snow enough on the ground to make comfortable sleighing, take up some fine young maples, elms, basswoods, tulip trees,

(whitewood,) put them on the sled and transport them to your homes, plant them along the roadsides, and here and there in the vicinity of your dwellings; and in a year or two you will find you have made a wonderful improvement in the comfort of your home and the appearance of your home landscape. Dig good large, wide, and deep holes for them. *First*, have some good loam from the fence corner or the woods, to put about the roots. Take them up with *all* the roots entire, prune the heads lightly, but don't "*pollard*" them; that is, cut off the heads entirely; for that destroys their natural characteristic forms for several years. *Shorten* the limbs only. If evergreens, such as Balsam Firs, Spruces, Hemlocks, Pines, and Cedars, can be had, don't fail to add a few of them.

PROCEEDINGS OF THE POMOLOGICAL CONGRESS.

THE Proceedings of the Pomological Congress held in Philadelphia on the 13th and 14th of September last, have made their appearance in a heavy pamphlet of 168 pages. We are indebted to Dr. W. D. BRINCKLE, of Philadelphia, for an early copy. This volume surpasses by far any of its predecessors, not only in the quantity, but in the value of its contents; and this value is greatly enhanced by its prompt publication. It opens with the excellent address of the President, Dr. BRINCKLE; then follow the lists of delegates, showing thirteen States to be represented; then the officers elected for the ensuing year; address of the Hon. M. P. WILDER, the newly elected President, on taking the chair; proceedings in regard to the late A. J. DOWNING; subjects reported by the business committee for the action of the meeting; Constitution and By-Laws of the Pomological Society; discussions on fruits; committees; lists of contributors of fruits; catalogue of varieties adopted, recommended, and rejected by the Society; reports of State committees; and lastly, the eulogium pronounced by Col. WILDER. The Reports of the State Fruit Committees contain many valuable and interesting facts and statements, which we shall hereafter cull, as leisure permits. We find reports from Maine, Vermont, New York, New Jersey, Pennsylvania, Delaware, District of Columbia, Virginia, South Carolina, Kentucky, Michigan, and Illinois.

The discussions on fruits we had intended to condense, and give a sketch of their substance; but not finding leisure to do so, we shall at present extract entire, as we find them in the report, the discussions on three popular varieties of pears, the *Dearborn's Seedling*, *Duchesse d'Orleans*, and *Doyenne d'Ete*:

"Hon. SAMUEL WALKER, Massachusetts. I will suggest the propriety of cancelling from that list the *Dearborn's Seedling*. I am ready to admit that when you have a fine large specimen, well ripened, it has very few equals, and I was almost about to say, has no superiors. I have found it, however, to be a very small pear as regards the average crop, and not well fitted for the market. My next reason is that it is a very poor grower, and in order to get fine specimens of it, the grafts must be put into large stocks, say from twelve to twenty years old; then it must be very well cultivated. I make these remarks to ascertain the experience of other gentlemen in regard to this pear.

"Mr. S. B. PARSONS, Flushing, Long Island. I am sorry the *Dearborn's Seedling* proves so bad near Boston. With us, on Long Island, it is the best pear of the season, although not very large.

"Mr. HANCOCK, Burlington, New Jersey. It has done very well with me for the last six years; but I find one objection to it, and that is, if you have a large crop, the pears are inferior. For my own section of the country, I hope it will not be stricken out. I speak of New Jersey.

"Col. HODGE, of New York. I have known this pear six or eight years, and have made up my mind to strike it out from my own collection for two years past, and for myself move it be stricken from the list.

"Mr. HAYES, of New Jersey. I have found, from actual experience, that it has been more profitable to raise it for the market, this season, than any other early pear, and I am very much opposed to striking out pears and other fruit until they have been thoroughly tried. I trust it will not be stricken out.

"Mr. ESHLEMAN, of Pennsylvania. With me the *Dearborn's Seedling* in the interior of this State is prolific to a fault, and small, but as good as anything we have of its season.

"Hon. R. V. FRENCH, Massachusetts. When that pear first made its appearance in our horticultural rooms I thought it unworthy, but I believe I shall now do something with it. However, I don't think much of any early pear; but notwithstanding, though I voted against its admission, I shall let it remain in.

"Mr. ERNST, from Ohio, thought little of the pear, and said that for worse pears, in his estimation, he had obtained a better price.

"Mr. BARRY, of New York. I am quite surprised to hear that the Honorable gentleman from Massachusetts recommends that *Dearborn's Seedling* should be stricken out, for in New York it is a good pear.

"Mr. HOVEY, of Massachusetts. I, for one, am opposed to going back, and taking out anything we have already recommended; and I trust we shall not, during this Convention, adopt any one fruit for general cultivation in regard to which there is the slightest doubt. I always am opposed to retrograde motion. The *Dearborn's Seedling* is one of the best small pears, and I feel it my duty to say a word in favor of it. It is a full medium-sized pear, and I have seen specimens from Western New York and Massachusetts, from Utica and Rochester, as large as the average *Seckels* that we see. We had better let it remain just where it is. It ripens on the tree, and does not rot at the core; I therefore trust it will not be removed from this list.

"Col. HODGE, of New York. I am glad to hear good reports of it from different parts of the country, but with me it has proved quite indifferent, and I was glad to hear the Hon. Mr. WALKER make the remarks he did in regard to it. However, seeing so much opposition, I withdraw the motion.

"Mr. HOVEY, of Massachusetts. I move that the *Duchesse d'Orleans* be added to the list for general cultivation. I know it is a good pear, and will do well everywhere. The pear is well known around Boston, and came from France with a high reputation. It is large in size and delicious in flavor. It is precisely the same as the *Beurre St. Nicholas*, and Mr. RIVERS says he considers it fully equal in flavor to the *Bergamot*.

"Mr. SAUL, of New York. This pear has proved very good in our locality; but we hardly know enough of it to recommend that it should be brought into general cultivation.

"Mr. WALKER, of Massachusetts. I have had the *Duchesse d'Orleans* in my collection for three or four years, and think it should be annexed to the list of pears that promise well; but I have no doubt it will find its way upon the list for general cultivation when better known.

"The PRESIDENT, Hon. M. P. WILDER, of Massachusetts. On the quince it is not a good grower with me; but on the pear it is, and produces a fine and handsome fruit. It has not been with me a great bearer, although I have a pretty fair crop this year, and perhaps enough for the tree. I should judge my experience does not agree with that of Mr. MANNING, who has called it a great bearer. But as regards the quality and beauty of the fruit, I think there can be no doubt.

"Mr. BARRY, of New York. We have tested it on the quince and pear, and its quality is very fine; and I believe it is going to be one of the finest pears for cultivation. I think, however, it would not be doing the pear justice at the present time to put it on the list for general cultivation, as it is not sufficiently well known for many to vote understandingly in regard to it.

"It was agreed that the *Duchesse d'Orleans* remain on the list as promising well.

"Mr. SAUL. I move that the *Brandywine* and *Chancellor* stand on the list as giving promise of being worthy.

"This motion was agreed to.

"Mr. HARVEY. I move that the *Doyenne d'Ete* be placed on the list for general cultivation.

"Mr. ERNST, of Ohio. It has proved to be an exceedingly beautiful fruit, and I can cheerfully vote for it as far as my experience goes.

"Mr. S. B. PARSONS. We consider it in Flushing the first good pear.

"Mr. SAUL. It has proved to be one of the very best small pears.

"The PRESIDENT. I enter into the views of those who have already spoken, but think it will be better on the pear than on the quince.

"Mr. HANCOCK, of New Jersey. I think it is better on the pear than on the quince.

"Mr. HOVEY. It don't make that vigorous tree on the quince that it does on the pear.

"Mr. WALKER, of Massachusetts. From such a mass of evidence in favor of this pear, I would hardly venture to say that I differ; but yet I can not be silent. It does not strike me as being so delicious as represented, and on the quince stock it is decidedly a poor grower. It drops its fruit, and it bears rather the reverse character to a first rate grower with me. On its own stock it does better and the fruit is larger; but I think the gentlemen overrate the pear. If my specimens are a fair sample of the fruit, I venture to say that in two or three years hence they will change their views of the matter. I hope the chair will give his opinion in full.

"Hon. M. P. WILDER, of Massachusetts. I have already expressed an opinion, that on the pear stock it is a desirable variety, and the remarks that have been made in regard to it on the quince, correspond with my own experience. It should be picked before the season of its ripening. It comes at a period when there is nothing so beautiful. We have the *Madeleine* at nearly the same time; but I still think it a desirable variety in rich soils.

"Mr. BARRY, of New York. The impression we have got is that it is decidedly the best early pear. At Utica, the other evening, there was a small Convention of fruit growers, and they decided, unanimously, that this was the best early pear. It ripens with us before the *Madeleine*, and is decidedly better. It is a splendid grower on the quince, and so it is on the pear, and when it comes off the tree it is full of juice and luscious.

"Mr. Nourse, of Maine. We have had but little opportunity to test in Maine; but it is there regarded as the best pear, and is considered better than the *Madeleine*. It ripens about the same time.

"It was decided that the *Doyenne d'Ete* is worthy of general cultivation."

The following is a catalogue of all the varieties recommended by the Society at its several sessions, for general cultivation and trial:

FRUITS WORTHY OF GENERAL CULTIVATION.

APPLES.

American Summer Pearmain,
Baldwin,
Bullock's Pippin,
Danvers Winter Sweet,
Early Harvest,
Early Strawberry,
Fall Pippin,
Fameuse,
Gravenstein,
Hubbardston Nonsuch,
Large Yellow Bough,
Lady Apple,
Porter,
Red Astrachan,
Rhode Island Greening,
Roxbury Russet,
Summer Rose,
Swaar,
Vandervere,
White Seek-no-Further,
Wine Apple, or Hays,
Winesap,

And for particular localities.

Canada Red,
Esopus Spitzenburg,
Newtown Pippin,
Northern Spy,
Yellow Belle Fleur.

PEARS

Ananas d'Ete,
Andrews,
Belle Lucrative or Fondante d' Automne,
Beurre d'Anjou,
Beurre d'Aremberg,
Beurre Bosc,
Bloodgood,
Buffum,
Dearborn's Seedling,
Doyenne d'Ete,
Flemish Beauty,
Fulton,
Golden Beurre of Bilboa,
Louise Bonne de Jersey,
Madeleine,
Paradise d'Automne,
Rostiezer,
Seckel,
Tyson,
Urbaniste,
Uvedale's St. Germain, for baking
Vicar of Winkfield,
Williams' Boncretien or Bartlett,
Winter Nelis.

And for particular localities.

Grey Doyenne,
White Doyenne.

APRICOTS.

Breda,
Large Early,
Moorpark.

NECTARINES.

Downton,
Early Violet,
Elruge.

PEACHES.

Bergen's Yellow,
Cooledge's Favorite,
Crawford's Late,
Early York, *serrated*,
Early York, large,
George the IVth,
Grosse Mignonne,
Morris White,
Old Mixon Free.

And for particular localities.

Heath Cling.

PLUMS.

Bleecker's Gage,
Coe's Golden Drop,
Frost Gage,
Green Gage,
Jefferson,
Lawrence's Favorite,
Purple Gage,
Purple Favorite,
Washington.

And for particular localities.

Imperial Gage.

CHERRIES.

Belle Magnifique,
Black Eagle,
Black Tartarian,
Downer's Late,
Downton,
Elton,
Early Richmond, for cooking
Graffion or Bigarreau,
Knight's Early Black,
May Duke.

GRAPES.

Under Glass.

Black Hamburg,
Black Prince,
Black Frontignan,
Chasselas de Fontainebleau,
Grizzly Frontignan,
White Frontignan,
White Muscat of Alexandria.

Open Culture.

Catawba,
Isabella.

RASPBERRIES.

Fastolf,
Franconia,
Red Antwerp,
Yellow Antwerp.

STRAWBERRIES.

Boston Pine,
Hovey's Seedling,
Jenney's Seedling,
Large Early Scarlet.

CURRANTS.

Black Naples,
May's Victoria,
Red Dutch,
White Dutch,
White Grape.

GOOSEBERRIES.

Crown Bob,
Early Sulphur,
Green Gage,
Green Walnut,
Houghton's Seedling,
Iron-monger,
Laurel,
Red Champagne,
Warrington,
Woodward's White Smith.

NEW VARIETIES WHICH PROMISE WELL.

APPLES.

Autumn Bough,
Hawley,
Melon,
Mother,
Nothern Spy,
Smoke-house.

PEARS.

Brandywine,
Brande's St. Germain,
Beurre Giffard,
Chancellor,
Doyenne Bousock,
Doyenne Goubault,

Duchesse d'Orleans,
Duchesse de Berri,
Diller,
Jalousie de Fontenay Vendee,
Kirtland,
Limon,
Manning's Elizabeth,
Nouveau Poiteau,
Onondaga,
Ott,
Pratt,

Paradise d'Automne,
St. Michel Archange,
Stevens' Genesee,
Striped Madeleine,
Van Assene.

PLUMS.

McLaughlin,
Prince's Yellow Gage,
Rivers' Favorite,
St. Martin's Quetche.

CHERRIES.

Bigarreau Monstreuse de Bavay,
Earle Purple Guigne,
Reine Hortense.

GRAPES.

Diana.

RASPBERRIES.

Knevett's Giant.

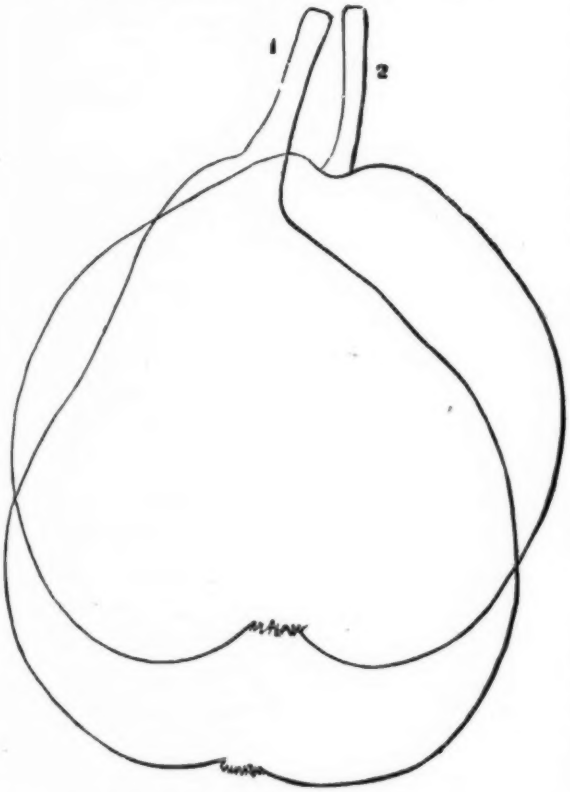
STRAWBERRIES.

Burr's New Pine.

NEW FOREIGN PEARS.

BY B. DESPORTES, OF ANGERS, FRANCE.

Baron de Mello. (*Adele de St. Ceras.*) Fig 1.—I find this variety in the collection of Mr. Andre Le Roy, but do not know its origin. It is disseminated under the names of *Baron de Mello*, and *Adele de St. Ceras;* but I think the first ought to be preserved, and we shall adopt that name. *Fruit* medium to large size.—*Skin* clear russet. *Eye* shallow; diversions of the calyx short. *Flesh* yellowish white, half melting, very juicy, sugary, with a slight acidity and a very agreeable flavor. It is a good fruit, ripening in October. The *tree* is of medium vigor, very much branched. *Shoots* long, and of a violet red color, covered with brown dots. *Buds* large, conical.—*Leaves* flat, lanceolate, and almost entire. Remarkably productive.



We will add that this variety has fruited in several collections in this country. We received it from France as *Adele de St. Ceras*, and from Rivers as *Baron de Mello*. we presume the latter will be the generally adopted name Specimens from our own trees, that were picked for the exhibitions, ripened and were eaten on the 28th of September. Our notes made at that time describe it as "large, greenish russet, becoming a rich cinnamon. *Stalk* obliquely inserted under a fleshy knob. *Flesh* greenish white, juicy, melting, with a sprightly, agreeable flavor. Evidently related to the *Brown Beurre.*" We had specimens sent us by Col. Wilder of Boston,

which we cut on the 22d of October. similar in character to our own, but with a less degree of acidity. Rivers describes it as "a very good, melting pear, equal to *Brown Beurre*, and quite hardy. Succeeds well on the quince, and forms a handsome pyramid."

Bezy Goubault. Fig. 2.—This variety was originated by Goubault, at Angers, some ten years ago. The *tree* is of remarkable vigor, somewhat thorny, resembling in its form and habit the *Glout Morceau*. The *branches* are irregular, with a dark gray bark. *Joints* short. *Buds* very large and prominent. The *leaves* are short, lightly toothed, and of a dark blackish green. *Fruit* roundish, large. The *stalk* is inserted in a cavity formed by two small *mamelonus*. The *calyx* is small, in a large and deep cavity. *Skin* yellow, marked with brown points or dots, and a large patch of russet around the stem and eye. *Flesh* yellow, fine, melting. *Juice* abundant, with considerable acidity. Ripens in October and November. Very productive.

We are inclined to think, from Mr. Desportes' description of this variety, that it will be a better *kitchen* than *table* pear.—Ed.

Fruits from New Hampshire.—Finding that you take much pleasure in testing and discussing the qualities of the different varieties of fruits, as they become introduced to the public, I send you some of the native varieties found in my immediate vicinity.

No. 1 is a native fall apple, which we call the *Woodward;* Mr. Woodward originally owning the land on which the tree stands. It is now owned by D. Bosworth. The tree is a good bearer in even years, and bears moderately in the intermediate years. The tree has never been cultivated, and stands in an old pasture which inclines moderately to the west. The soil is a sandy loam, rather moist.

No. 2 is a winter variety, which originated on the land originally owned by J. Ticknor, and called the *Hebbard Russet;* J. Hebbard now being the proprietor. The soil is very much like the first, with a westerly inclination. The original tree is probably sixty or more years old; and although it has never been cultivated, and stands so as to take the full northwest blast, it is still thrifty, and bears large crops. I find by cultivation that it is perfectly hardy in this vicinity, and bears well; the fruit almost invariably fair. The young trees in the nursery are inclined to throw out lateral branches; and for this reason they may be set nearer together, and they produce straight, handsome trees.

The pear is what we call the *Tilden*, Mr. Asa Tilden owning the land on which it grows. It is rather a shy bearer when young; but I think that this will be materially changed when the young grafted trees come into bearing, as nearly all of the trees now of bearing size were raised from suckers from the old tree. The original tree and all the young trees when they come into bearing, produce large crops and bear every year. The trees are good growers and hardy. I can not send you a fair sample of this pear, as it is too late for them. The one I send you is about half the usual size.

The apples are about the medium size as they generally grow in this vicinity. Those I send were picked from the original trees. R. S. Howe.—*Lebanon, N. H.*

The *Tilden* pear is a handsome medium-sized fruit, obovate in form, inclining to oval. Skin smooth, yellow, tinted with red next the sun, and thickly sprinkled with reddish dots. Flesh juicy, melting, and sweet; pleasant, but not high flavored.

The *Woodard* apple is a very beautiful fruit, resembling the *Summer Rose*. Pale yellow or cream colored ground, with broken stripes and dashes of light red. Flesh soft, tender, and fine grained. The flavor was impaired by carriage when in a ripe state.

Acknowledgements.—We are indebted to Hon. Marshall P. Wilder, of Boston, for superb specimens of the following pears: *Beurre d' Anjou, Triomph de Jodoigne, Urbaniste, Beurre Superfin, Beurre Langelier, Baron de Mello, Nouveau Poiteau, Van Mons'* 1825, and *Collins*, (a native sort.)

— To Dr. Pennington, of Illinois, for very large and beautiful specimens of the following apples: *Smoke-house, Tulphocken, Willow Twig, White Belle Fleur, Winesap, Rambo, Smith's Cider, Yellow Belle Fleur, Belmont, Rawles Janet, Vandervere,* and *Dominie.*

Editor's Table.

LADIES' DEPARTMENT.—Our Index, &c., so occupies our room this month, that we are compelled to omit our Ladies' Department. The following is one of the many inquiries we have received in relation to Flower Seeds:

"My wife wished to inquire if your offer of flower seeds extends to another spring, as she is anxious to try the effect of introducing the flower culture among the Indian women, with a hope that, like music, it may exert a refining, humanizing influence over their tastes and habits, and thus aid us in our missionary labor." A. S.—*Versailles, N. Y.*

We are not proof against such appeals, and shall supply our female friends who may apply during the winter, with seeds in season for spring planting.

IMPERSONALITY OF THE PRESS.—The Boston *Journal of Agriculture* for November, contains a vehement personal attack on the proprietor of this paper for a criticism of a series of articles written by Mr. LEVI BARTLETT, and published in the *Journal* under the heading, "Theories Examined and Explained." Had the author of said attack thought of the impersonality of the press, and the comity of journalists, he would have learnt the name of the offender, before he presumed to call names and use harsh epithets. Having failed to do this, he has wantonly assailed one who neither wrote nor saw the comments on Mr. BARTLETT's articles until they appeared in the *Genesee Farmer*. They were written by Mr. JOSEPH HARRIS, who was with Mr. LAWES and Dr. GILBERT when the experiments and researches were made upon which the discussion arose.

It is due to Mr. H. to say, that he has contributed much to the editorial pages of the *Farmer* during the year, in the volume now brought to a close; and to add that his name will hereafter appear as one of the responsible editors of this journal. The proprietor acts upon the principle that it is better to pay liberally for original matter of real value than to publish that of an inferior quality, though paid for inserting it. So long as the farmers, gardeners, and fruit-growers of this continent sustain the *Genesee Farmer* as they now do, it shall faithfully represent their paramount interests, regardless of all mere personal considerations.

CORNSTALK CUTTERS AT THE STATE FAIR.—JOSEPH G. GILBERT, 216 Pearl street, New York, complains that in our account of the late State Fair at Utica, we noticed "TAYLOR, THOMAS & Co.," and "HUBBS Patent" Straw and Corn Cutters, but did not mention "URMY's Patent Corn Stalk Cutter and Grinder," which also was upon the ground.

We did not pretend to any such a task as giving an account of all the valuable implements exhibited, but merely intended to mention such as were recent inventions or improvements on those commonly in use, as came under our observation in the short time allowed us for their examination. We regret that we did not see URMY's Cutter and Crusher. If, as the published testimonials say, it will cut and crush 75 to 100 bushels of stalks, or one ton of hay and straw, per hour, worked by hand, and that in consequence of the crushing, the cattle will eat up all the stalks without waste, it is a valuable cutter. Price $35.

YOUMANS' CHART OF CHEMISTRY AND CLASS BOOK OF CHEMISTRY.—Mr. EDWARD L. YOUMANS has rendered the public a great service in getting up a Chart of Chemistry, for the use of schools and academies, which, with his Class Book, will render the study of the principles of the science at once easy and interesting. The importance of a knowledge of chemistry to the farmer, gardener, mechanic, manufacturer, and professional man, is now universally admitted; and the only debateable point is, the best plan of teaching the science. For the million, Mr. YOUMAN's Chart is *the thing;* and every school in the United States should have one for the benefit of its pupils.

NEW AGRICULTURAL PAPERS.—Messrs. A. B. ALLEN & Co., of New York, have commenced the publication of a large, well filled weekly sheet called *The Agricultor;* and Mr. LUTHER TUCKER, of Albany, N. Y., has started a somewhat similar journal, folded to have sixteen pages, under the title of *The Country Gentleman.* The proprietors of these papers are well known to reading farmers, and each offers his hebdomadal at $2.00 per annum.

OUR friends ordering the *Farmer* will be particular in giving the name of the Post Office, County and State; also, in writing names plain, as by this much perplexity may be avoided to ourselves and subscribers.

TERMS—FIFTY CENTS a year for single copies; *five copies* for $2, being *forty cents each;* and *eight* copies for $3, being *thirty-seven cents each,* and any greater number at the same rate.

AGRICULTURE IN MAINE.—A handsome, well arranged volume, entitled, "Transactions of the York County Agricultural Society for the years 1850 and '51"—for which we are indebted to the Secretary, S. L. GOODALE, Esq., of Saco—shows that our eastern friends are no less active in promoting agricultural improvement than those who consider themselves favored with a more genial climate. We have perused with pleasure an admirable and awakening address, by the Rev. W. A. DREW, of Augusta, delivered before the Society in 1850; another, by Dr. HOLMES, of Winthrop, in 1851; also a valuable paper on agricultural education, besides many interesting reports.

A county with a Society such as that of York appears to be, can not but be in a most prosperous condition.

A FINE FARM FOR ORCHARDING.—GEO. J. WHITNEY, Esq., of Rochester, offers to sell, or rent for a term of years, his beautiful farm on the Rochester and Charlotte Plank Road, in the neighborhood of Mr. DONNELLAN'S and Messrs. RYAN & Co.'s gardens and nurseries. It contains 150 acres of land, all in fine condition, well fenced, &c., with large orchard of the best fruit just coming into bearing. It is well watered and contains every requisite for orcharding. To any person desiring to embark in this business, a more eligible location, or tract of land cannot be found. We thus notice it because we have heard of late several inquiries on the subject.

MANY articles, some of them in type, we are compelled to omit; among them several answers to inquiries, which will appear in our next.

ADVERTISEMENTS, to secure insertion in the *Farmer*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

Inquiries and Answers.

WATERING SHEEP, &c.—Many times have I been thinking on some doubtful point connected with agriculture, and on the "tip toe" of writing to you for light on the subject, when the very next number comes with the answer to some other inquirer. But there are several questions in my mind which I have not seen treated upon:

1st. Concerning sheep watering—Some farmers let their sheep go all the season without water. Is this right or wrong? Have any experiments been tried on this point? What is the effect of not watering?

2d. Can as much butter be obtained from sweet milk as from the same quantity of sour? Experiments and facts wanted.

3d. Are cisterns ever used on dry farms? If so, with what success?—the best mode of constructing them, &c. &c.

R. P. ROBINSON.—*Chittenango, N. Y.*, 1852.

1st. When sheep are fed on green food they will do very well without water; but if their food is dry, a regular supply of water is absolutely necessary for the health of the animal. In winter many farmers we know do not give their sheep any water, and the poor things have to supply themselves by eating snow; but when water is accessable they manifest a decided preference for it and drink regularly. In some experiments on South Down sheep, we found that when fed on clover hay alone, in the summer months, each sheep eat about three pounds of clover hay and drank six pounds of water per day. Thinking they drank more than was good for them, we confined them to a less quantity for a week; they did not eat so much food, and *lost weight* during that week.

2d. There is considerable difference of opinion on this point. Some say the butter is sweeter and altogether better when the milk is churned while sweet, than if soured. It is, however, exceedingly difficult to get the butter from sweet milk; and, in fact, however sweet the milk may be when put into the churn, it always turns sour in churning or the butter will not come. A better quality, though possibly not so large a quantity, of butter can be obtained from the cream alone, than when the whole cream and milk are churned together; there is less cheesey matter (casein) in the butter, and it is better for packing and preservation. There is the same amount of butter in the sour milk as there is in the sweet; the sugar, and not the butter, being converted into lactic acid; and as butter is obtained much easier from sour than from sweet milk, it is probable that the sour milk will yield the most butter.

3d. We know of no satisfactory experiments on the point.

HORTICULTURAL.

(DAN'L F. H.) The wild crab may be used for a stock. We should prefer grafting it near the ground, unless very large, in order to avoid the difficulty of the scion over or out growing the stock.

A Subscriber wishes to know where he can obtain Cranberry *seed*, and the quantity necessary for an acre, and also the manner of sowing, culture, &c., &c.

Willow cuttings can be procured at the nurseries. You will find a market in any large town, only let it be known that you have such an article for sale.

(V. T., Kingsville.) We would advise you to plant your Osage Orange next spring. We prefer

yearling plants for a hedge, to those which have stood two years in the seed bed. You have to cut them back to near the surface of the ground, at any rate, and the young plants are less checked, and throw out an abundance of branches with more rapidity than the two year olds.

(J. M. WARD.) PLANT BUGS.—The bug so injurious to your potatoes and flowers, is probably the common squash bug; and the means you have adopted to destroy them or prevent their ravages, are the only ones we know, unless that of calling in the aid of poultry.

THE BLACKBERRY.—This is cultivated in the same way as the Raspberry. Give them a good, light, rich, loamy soil.

THE HORTICULTURIST.—Address JAMES VICK, JR., one of the editors of the *Farmer*, who has recently purchased it and will publish it after the 1st of January, as you will see by prospectus.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers, Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-tf. State Ag. Warehouse, 25 Cliff st., New York.

Superphosphate of Lime.

THE genuine article, manufactured by C. Duburg, in bags of 150 lbs. each. The subscribers have made a contract for a large quantity. We are now prepared to supply any quantity that may be ordered. Farmers and gardeners would do well to call on us before purchasing elsewhere, as we are now able to sell for a less price than heretofore offered. Every bag is branded "C. Duburg, Extra, No. 1."

LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25 Cliff Street, New York. [11-tf]

Pure Java Fowls,

WARRANTED PURE, from Imported stock direct from Java. This breed is not excelled by any raised in the United States for laying or hatching. Weight from 15 to 20 lbs. per pair. Their color is a shiny black.

Also, some very fine Black Polands, which are better known than the Javas.

☞ Price—Javas, $5.00 per pair; Polands, $5.00 per pair. Address J. W. PLATT,
[12-*1] Rhinebeck, N. Y.

ANDRE LEROY,
Nurseryman, at Angers, France,

HONORARY and Corresponding Member of the principal Horticultural Societies of the United States and Europe, begs leave to inform his friends and all the Nurserymen of the Union in general, that he has made large preparations and has now on hand, a considerable stock of the finest Evergreen Seedlings, Roses, Fruits, and Ornamental Trees, &c. &c., most suitable for the American market. The experiments of several years, of putting up large orders for the United States, enables him to flatter himself that he has now all the necessary knowlepge to give full satisfaction, and to insure the delivery, in good order, of all the Trees, &c., ordered.

He also begs to inform all Nurserymen who have not already received the supplement for 1852, to his Catalogue for 1851—that it can be obtained free of any charge at his Agent's office, M. Ed. Bossange, 138 Pearl St., New York, who will also attend to forwarding all orders sent to him, and to pass through the Custom House; and re-ship all goods ordered without any delay and with the greatest care.

Address M. ANDRE LEROY, Angers, France, care of
ED. BOSSANGE,
[11-2t] 138 Pearl Street, New York.

Potatoes—The White Mercer.

500 BARRELS of the White Mercer (seedling) Potatoes are now offered for sale by the subscriber. This remarkable white potato is of almost unparalleled productiveness—of beautiful shape—its proportion much like the long pink-eye, being a little more flattened.

This potato was obtained by the subscriber from the seed of the common Mercer, nine or ten years since. It received the first premium from the N. Y. State Agricultural Society, and a Diploma was awarded for the same by the Monroe Co. Agricultural Society. Since this period the White Mercer has attained, in Irondequoit, increased popularity with farmers and gardeners—to so great an extent that from 800 to 900 acres were planted in that town, the past season, the product of which has been astonishingly abundant—yielding from 150 to 400 bu. per acre, as I have been creditably informed. The yield of my own crop, planted mostly among fruit trees, gave 200 bu. of fine potatoes per acre. Those who have hitherto had but a scanty supply of the article, on account of the rot, or from any other cause, may, by obtaining a barrel or two of White Mercers grow them in great abundance.

The White Mercer is very white outside and in, mealy, of good flavor, and longer keeping than any other potato with which I am acquainted. It is a late grower, requiring early planting, and is less subject to rot than any other potato known in these parts.

Price $2 per barrel, shipped to any part of the United States. Orders will be received through the Rochester P. O. till the stock of potatoes are exhausted, after which notice will be given, and all moneys returned promptly if the potatoes are not forwarded.

H. N. LANGWORTHY.
Irondequoit, near Rochester, N, Y. [12-tf]

Important to Farmers.
PORTABLE MILL.

OAKLAND, near Geneva, N. Y., Aug., 28, 1852.

MR. CHARLES ROSS—Dear Sir:—In reply to your letter of the 25th inst., it is a pleasure to speak in commendation of your Patent Conical Mill. To me it has proved valuable for grinding food for my stock, as a few hours labor with this Machine prepares food enough for fifteen head of cows several days. The Mill used by me prepares food for horses, sheep, and swine, grinding and mixing corn, oats and other grains, satisfactorily. It has also produced for my use, our Indian meal, buckwheat meal, and occasionally wheat flour, thus saving the time of teams and men, which otherwise must have been occupied, going several miles to a distant mill, at much expense; it is therefore a source of economy as well as an inducement to better care of all stock. It affords also one among other resources of convenient and useful labor during stormy weather. My belief is that your Mill will work its way into general use upon farms where stock is raised, and where grist mills are not within a short distance. In my estimation this mill is among the most important machines offered to the farmer.

Respectfully yours, J. DELAFIELD.

N. B.—Mr. Delafield has had the Conical Mill in use on his farm for nearly four years.

Any further information respecting this Mill, may be obtained by letter (post-paid) addressed to

CHARLES ROSS, Manufacturer,
2d story Phœnix Building, Acqueduct st., opposite the Arcade, Rochester, N. Y.; or to Joseph Sedgebeer, General Agent for the West.
December. 1852.

BOOK AGENTS WANTED.

GOOD salesmen can earn from $1 to $3 per day, in selling
AGRICULTURAL BOOKS,
POLITICAL CAMPAIGN BOOKS,
LARGE AND SMALL BIBLES,
POLITICAL AND OTHER PICTURES,
Uncle Tom's Log Cabin; Uncle Tom as it is; Northwood, Mrs. Hale's new book; Cheap Publications; Gold Medals, Gen. Scott and Gen. Pierce; together with other new books.

I will furnish agents with from $15 to $30 worth of books for cash, and take back all the unsold books and refund the money. Agents can make from 25 to 100 per cent. profit, and in this way are not compelled to keep their stock if not sold. Books can be sent by Express to any address. Money can be safely sent by mail. Address

D. M. DEWEY,
Oct., 1852. Arcade Hall, Rochester, N. Y.

THG GENESEE FARMER FOR 1853.

THE present number completes the volume for 1852. To those who have read the *Farmer* this year, we need not say that we have spared neither labor nor expense to make our paper interesting and valuable. But for our large and almost unparalleled circulation, every volume we print would cost us more than the price charged to subscribers. To our friends and agents everywhere, we tender our acknowledgements for past favors, and hope to increase our indebtedness another year. Let every subscriber spend an hour in calling the attention of his friends and neighbors to the claims of the *Genesee Farmer*, and we shall more than double our circulation the coming year. Let all engage in this work, and form clubs early. Our agents are already sending in their orders, and from every quarter thus far heard from, large additions are made to former clubs.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIV, FOR 1853.

DANIEL LEE, JAMES VICK, JR., & JOSEPH HARRIS, EDITORS.

P. BARRY, Conductor of Horticultural Department.

IN issuing a Prospectus for the FOURTEENTH Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are invited to examine its pages.

The Fourteenth Volume will commence on the 1st of January, and will be issued regularly on the 1st of each month during the year. It will be printed on new type and superior paper, each number containing THIRTY-TWO PAGES, and making at the end of the year a Volume of 384 pages, with title page, index, &c., suitable for binding. The work is appropriately illustrated with beautiful and really valuable engravings of Farm Buildings, Implements, Domestic Animals, Choice Fruits, Flowers, Shrubs, &c.—The Volume for 1852, when bound, will make the most valuable Volume on Agriculture yet published in this country. The Volume for 1853 we design still farther to improve, and hope to be sustained in our efforts by the farmers of the country.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The *Genesee Farmer* is by far the Cheapest Agricultural Journal published in America.—Our FORTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enable us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in value and beauty. Its position as the *Cheapest*, and at least one of the *Best Agricultural Journals* in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners, and Fruit Culturists of the United States. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but to introduce it to the patronage of their friends.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, FARMERS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,

November, 1852. *Rochester, N. Y.*

POSTAGE LAW.—By the new Postage Law, which took effect on the 1st of September last, the postage on the *Genesee Farmer* for one year is as follows,—when paid quarterly in advance:

Anywhere in the State of New York,..3 cts.

Anywhere in the United States,.....6 cts.

Sausage Cutters and Stuffers.

A VERY superior article, made of wood and iron, that will cut from 70 to 100 lbs. per hour. Price $4, $5 and $8 each. For sale by LONGETT & GRIFFING,

[11-3t] No. 25 Cliff St., New York.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Cheapest Newspaper in the World!

THE ROCHESTER WEEKLY AMERICAN,

(A MAMMOTH FAMILY AND GENERAL NEWSPAPER,)

WILL be afforded, from and after January 1st, 1853, at the unparalleled low price of *ONE DOLLAR PER ANNUM*, payable *invariably in advance*.

The AMERICAN is the largest and best weekly journal in the State of New York. It contains thirty-six columns, filled with choice original and selected articles, and embracing all those topics which are looked for in the most popular, comprehensive and valuable journals of the day.

Particular attention is paid to the markets of all agricultural products.

Persons desiring to subscribe will please enclose One Dollar, post-paid, to LEE, MANN & Co., Rochester, N. Y., proprietors of the *American*.

The postage on the *Weekly American* (paid quarterly or yearly in advance) is 26 cents a year to any part of the United States. LEE, MANN & CO.

Rochester, N. Y., December, 1852.

THE COUNTRY GENTLEMAN.

A Journal for the Farm, the Garden, and the Fireside.

THE publisher of *The Cultivator*, having, since the death of Mr. Downing, disposed of *The Horticulturist*, has determined to carry into effect a project he has had for some years in contemplation, of establishing a Weekly Journal, in connection with *The Cultivator*, to be devoted to the cause of Agriculture, and the Rural Arts generally. In pursuance of this plan, he has issued a specimen number. The regular publication of *The Country Gentleman* will be commenced on the first Thursday of January, 1853, and its scope will embrace:

I. *The Farm.*—Including—1. The Principles of Cultivation, the Preparation of the Soil, and the most approved methods of Culture, of all the crops grown in this country. 2. The Manufacture, Preservation, and Application of Manures. 3. The Description and Illustrative Drawings of all Implements and Machines requisite for the Farmer's use. 4. The Breeding, Rearing, and Management, of all the Domestic Animals, with Engravings of the different breeds.

II. *The Garden and the Orchard.*—1. Descriptions will be given of all the Fruits, of the different varieties, suited to the various sections of the country, together with the best modes of Propagation and Cultivation. 2. Select Lists and Descriptions of Flowers, Shrubs, and Trees, suitable for large and small places, with Directions for their Culture. 3. Special attention will be given to the products of the Kitchen Garden, a department hitherto too much neglected, as there are many plants highly desirable for the table, which have not come into general culture.

III. *The Fireside.*—This department will be of a miscellaneous character, embracing every variety of instructive and entertaining subjects, such as Historical, Geographical and Biographical Notes, Literature, Natural Science, Tales, Poetry, &c., consisting of original articles and selections of a high order.

IV. *Record of the Times.*—Under this head will be given a concise and systematic abstract of the News of the Week, embracing briefly everything of general interest to country residents.

V. *Produce Markets.*—Great efforts will be made to render this department full and complete, and particularly valuable to the Farmer and Produce Dealers. A careful synopsis of the prices of Produce, Wool, Live Stock, &c., at the leading markets, will be given, as well as the condition of crops in the different sections of the country, &c.

It will be the aim of the publisher to make the paper attractive and elegant in its typography and illustrations, choice and select in its contents,—to make it indispensable to the Farmer, and desirable to every one who has a rod of ground to cultivate, or a home to beautify,—and by devoting its columns to Improvement in Agriculture, Elevation in Character, and Refinement in Taste, to render *The Country Gentleman* the standard in its sphere.

TERMS.— *The Country Gentleman* will be printed in quarto form, each number consisting of sixteen pages, and forming an annual volume suitable for binding, of 832 pages, at TWO DOLLARS per year when paid in advance, or $2.50 if not paid in advance.

☞ Specimen numbers sent to all post-paid applicants.

Albany, Dec., 1852. LUTHER TUCKER.

Important to Farmers.

IT IS generally conceded by all intelligent farmers that cutting the food for cattle will save from 25 to 30 per cent. Bertholf's Oblique Rotary Corn Stalk, Hay and Straw Cutter, is conceded by all that have used it to be far superior to any other, as it destroys all hard substances in the stalk leaving it soft and easily eaten. It turns very easy and is not liable to get out of order, and, with care, will last an age. It has been awarded Four First Premiums and a Silver Medal, by the American Institute. For further particulars address (post paid) the patentee, H. W. BERTHOLF, Sugar Loaf, Orange Co., N. Y., or LONGETT & GRIFFING, 25 Cliff St., New York, who are agents.

☞ Patent Rights for sale. [11-3t]

Premium Dahlias.

THE subscribers offer for sale this Autumn and the ensuing Spring, 10,000 Dahlia Roots, which have proved to be the choicest collection in the States and Canadas. [See records of the Fairs for the last four years.]

Persons commencing the Nursery business, and Amateurs, will find it to their advantage to give us a call, or make enquiries before purchasing elsewhere.

C. J. RYAN & CO.,

Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. [11-tf]

Emery's Patent First Premium, 1852,
RAILROAD HORSE POWER,
THRESHING MACHINES, SEPARATORS, &c.,
Western New York Agency.
E. D. Hallock, Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y

THE Subscriber, late from the Albany Agricultural Works, Warehouse, and Seed Store, where he has been engaged for the past six years, has secured the sole Agency for the sale of Emery's Patent Railroad Horse Power for Rochester and vicinity, so widely and favorably known throughout the country, and which has, without exception, taken every highest premium awarded in the States of Ohio, Michigan, and in New York, for the best Railroad Horse Powers, in 1850, 1851, and again in 1852, also at the Provincial Fair of Canada, recently held at Toronto, was awarded a Diploma and £2, of which the judges highly commend the principle and workmanship of this Power, now offer them at manufacturer's prices, with the transportation added, and subject to the warrantee as follows:

"To work to the satisfaction of the purchasers as represented in Circulars and Catalogues, or to be returned within three months and full purchase money to be refunded."

For further particulars see Circulars and Catalogues, which are furnished gratis on application to the subscriber.

The attention of the Farming public is solicited, and a careful investigation into the construction of this Power, and its comparative merits, as well as price, is requested before purchasing elsewhere.

The Wheeler Power is also offered *ten* dollars cheaper than heretofore by any other agency, and subject to same warrantee as given by others for the same kinds. Samples will be kept constantly on hand, and to insure promptness and avoid disappointments in supplying them, farmers are requested to send in their orders at as early a date as possible.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in this vicinity, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. [11-tf] E. D. HALLOCK.

CONTENTS OF THIS NUMBER.

The Philosophy of Tillage—Horse-hoeing Wheat,..... 361
Barn-yard Manure,..... 364
Improved Superphosphate of Lime,..... 366
Theories Examined and Explained,..... 368
British and American Agriculture,..... 370
Pea-culture in Indiana,..... 372
Guano on Potatoes,..... 373
Middlesex Hogs,..... 375
EDITORS' TABLE.—Notices, &c.,..... 382
Impersonality of the Press,..... 382
Inquiries and Answers,..... 383

HORTICULTURAL DEPARTMENT.

Our Native Trees,..... 376
Proceedings of the Pomological Congress,..... 377
New Foreign Pears,..... 380
Fruits from New Hampshire,..... 381
Acknowledgements,..... 381
Answers to Correspondents,..... 383

ILLUSTRATIONS.

Group of Middlesex Hogs,..... 374
Pear, Baron de Mello,..... 380
" Bezy Goubault,..... 380

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

PREMIUMS FOR 1853.

During the year 1852 the editors of the Genesee Farmer circulated over Eight Hundred Dollars worth of the best Agricultural Books published in the country. These works, in addition to *Forty Thousand Copies Monthly of our own Journal*, scattered all over the land, even to Oregon and California, we believe have exerted, and will continue to exert a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends and neighbors. They must increase the knowledge, and consequently the power, and the wealth of those for whose especial benefit we labor. It is our intention to increase the circulation of these works. We do this for the good they accomplish, as well as a slight compensation to our friends—the friends of Rural Improvement—particularly Post-Masters throughout the country, who act as voluntary Agents, without the expectation of pecuniary reward. Below we give our List of Premiums for 1853.

PREMIUMS TO INDIVIDUALS.

1st. THIRTY DOLLARS in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 10th day of April next, so that we may announce the successful competitor in the May number.

2d. TWENTY DOLLARS in *Agricultural Books*, to the person who shall send us the second highest list, as above.

3d. TEN DOLLARS, in *Agricultural Books*, to the person who sends us the third highest list.

In order to make the circulation of *Good Agricultural Books* More General and Beneficial, and to reward every one of the friends of the Genesee Farmer for their exertions in its behalf, we will give to those not entitled to either of the above premiums, the following *Books*, free of postage, or *Extra Papers*, as may be preferred:

1st. To every person person who sends SIXTEEN Subscribers, at our club terms of three shillings each, one extra copy of the Farmer.

2d. To every person sending for TWENTY-FOUR Copies, as above, any Agricultural Book valued at 50 cents, or two extra copies of the Farmer.

3d. To every person ordering THIRTY-TWO Copies of the Farmer, any Agricultural Book worth 75 cents, or three extra copies of the Farmer.

4th. For FORTY, any Agricultural Book valued at $1, or four extra copies of the Farmer.

5th. For FORTY-EIGHT, any Agricultural Book worth $1,25, or five extra copies of the Farmer.

☞ For larger numbers, Books or papers given in the *same proportion*. To *save cost* to our friends, we *pre-pay postage* on all Books sent as premiums, and persons entitled will please state whether they wish Books or extra papers, and make their selection when they send orders, if they desire Books; or if they have not obtained as many subscribers as they intend to, we will delay sending until the club is full, if so requested. We do not require that all the papers of a club should be sent to one Post Office. If necessary for the convenience of subscribers, we are willing to send to as many different Offices as there are members of the Club. We write the names on each paper, when a number is sent to the same Office, if so desired, but when convenient Post-Masters would confer a favor by having the whole number ordered at their own office, sent to their own address. ☜

COUNTY PREMIUMS.

To aid as much as possible in establishing *County Agricultural Libraries*, we offer the following Premiums, which we hope will aid in the more general establishment of County Libraries:

1st. We will give an AGRICULTURAL LIBRARY worth FORTY DOLLARS to the County in which the *greatest number of copies of the Genesee Farmer is taken by the 10th of April next.* This Library to be kept as a County Agricultural Library, under the care of the Agricultural Society.

2d. To the County in which the next greatest number is taken, an *Agricultural Library worth* TWENTY-FIVE DOLLARS, on the same conditions as above.

As the above two premiums will probably be taken in the *State of New York*, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to COUNTIES OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of our paper is taken, an Agricultural Library worth FORTY DOLLARS.

2d. To the next *County out of N. York*, a Library worth TWENTY-FIVE DOLLARS.

☞ As all Subscriptions commence anew with the year, places where the Farmer was never before taken will stand an equal chance in the competition for premiums. Individuals will receive the premiums to which they may be entitled for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited to the Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the County premiums, or the County with individuals.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers. We shall keep a correct account of the subscribers sent by each person and county. In the May number we shall announce the premiums. *Libraries* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us. ☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at our risk.

THE HORTICULTURIST FOR 1853.

THE melancholy death of A. J. DOWNING deprived the readers of the *Horticulturist* of the labors of one whose essays they had so long read with unmingled pleasure and profit. Since that sad event became known, the great question among the horticulturists of the country, who have evinced a deep interest in the matter, has been, who should succeed to this important post. With singular unanimity, it has been assigned to P. BARRY, of Rochester, who has been urgently solicited in various ways, both publicly and privately, to take charge of the work. This, from the nature of his engagements, he could not do while the *Horticulturist* was published at Albany. The subscriber, who has long been connected with Mr. BARRY, as one of the editors of the *Genesee Farmer*, has therefore purchased the *Horticulturist*, and after the conclusion of the present volume it will be PUBLISHED AT ROCHESTER, and EDITED BY P. BARRY, assisted by many of the best Horticulturists of the country, whose communications will materially add to its value. The ARCHITECTURAL DEPARTMENT will be conducted by gentlemen of ability and reputation.

To render the work accessible to a greater number, and consequently more beneficial, the price will be reduced to TWO DOLLARS per year, *in advance*, and at the same time various improvements made. Each number will contain a full page engraving of some new, rare and valuable fruit or flower, drawn from nature, and engraved in a style not excelled.

Still further to add to the value of the work and meet the improving taste and increasing wants of the Horticultural community, we shall also publish an edition with COLORED PLATES, each number containing a full page engraving of some new, rare and valuable fruit or flower, correctly colored from nature, by the best living artists in this line. This will be a new and important feature, in this country, and must command the attention and patronage of both professional and amateur Horticulturists. As the number of colored plates we can furnish will be limited, from the care and time required in their preparation, those who wish the *Colored Edition of the Horticulturist for* 1853 will do well to order immediately. Price with colored plates, FOUR DOLLARS, *in advance.*

All who cultivate fruit or flowers should read the *Horticulturist*, as it is devoted entirely to Horticulture and its kindred arts Landscape Gardening and Rural Architecture, and will keep its readers advised of everything new on the subject, either in Europe or America.

It will be our aim not only to make the Horticulturist superior both in style and matter to any work of the character in this country, but equal to any of the Horticultural Journals of Europe, and we confidently ask the aid and co-operation of the Horticulturists of the country. The January number will be issued early in December, and specimen numbers will be sent to all who will interest themselves in its behalf. The volume to commence on the 1st of January, 1853.

Address J. VICK, JR., PUBLISHER,

November 1, 1852. *Rochester, N. Y.*